

EXHIBIT A

Page 1

1 IN THE UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF TEXAS
3 SHERMAN DIVISION

4
5 THE STATE OF TEXAS, ET AL.,
6
7 v.
8 GOOGLE LLC
9

10 CIVIL NO. 4:20-CV-957-SDJ

11 Norton Rose Fulbright US LLP
12 1301 Avenue of the Americas
13 New York, New York 10019
14

15 March 11, 2024
16 2:04 p.m.

17 EXAMINATION BEFORE TRIAL of
18 [REDACTED], a 30(b)(6) Witness herein, taken
19 by the Plaintiff, pursuant to Article 31 of the
20 Civil Practice Law & Rules of Testimony, and Notice,
21 held at the above-mentioned time and place, before
22 JOANNA MARTINEZ a Notary Public of the State of
23 New York.
24
25

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A P P E A R A N C E S :

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ALSO PRESENT:
Jonathan Juarez,
videographer, Golkow

S T I P U L A T I O N S

IT IS HEREBY STIPULATED AND AGREED,
by and among counsel for the respective parties
hereto, that the filing, sealing and certification
of the within deposition shall be and the same are
hereby waived;

IT IS FURTHER STIPULATED AND AGREED
that all objections, except as to form of the
question, shall be reserved to the time of the
trial;

IT IS FURTHER STIPULATED AND AGREED
that the within deposition may be signed before any
Notary Public with the same force and effect as if
signed and sworn to before the Court.

* * *

1 THE VIDEOGRAPHER: We are now on the
2 record. My name is Jonathan Juarez. I am the
3 legal videographer for Golkow Litigation
4 Services. Today's date is March 11, 2024, and
5 the time is 2:04 p.m.

6 This deposition is taking place at 1301
7 thy Avenue New York, New York in the matter of
8 the State of Texas et al. versus Google, LLC.
9 The deponent is [REDACTED].

10 Counsel please identify yourselves for the
11 record.

12 MR. MCBRIDE: On behalf of the plaintiff
13 States, John McBride of Norton Rose Fulbright
14 LLP.

15 MR. MCCALLUM: On behalf of the defendant,
16 Google, Robert McCallum of Freshfields with me
17 here today I have my colleague also from
18 Freshfields, Veronica Bosco, and I anticipate
19 that my client, Mara Boundy, in-house counsel
20 for Google may join us at some point in the
21 near future.

22 MR. MCBRIDE: And I can't see the Zoom but
23 I believe that Trevor Young from the attorney
24 general's office of Texas is on as well as
25 Zeke DeRose and Melanie DeRose, from the Lanier

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1 Law Firm also on behalf of Plaintiff States.

2 THE VIDEOGRAPHER: The court reporter
3 is --

4 MS. DEROSE: That's correct.

5 THE VIDEOGRAPHER: -- Joanna Martinez and
6 will now swear in the witness.

7 -- O --

8 [REDACTED] [REDACTED], after having
9 first been duly sworn by a Notary Public of the
10 State of New York, was examined and testified as
11 follows:

12 BY THE STENOGRAPHER:

13 Q State your name for the record, please.

14 A [REDACTED].

15 Q State your address for the record, please.

16 A [REDACTED], New York, New York.

17 EXAMINATION

18 BY MR. MCBRIDE:

19 Q Good afternoon, Mr. [REDACTED].

20 A Good afternoon.

21 Q You are employed by Google?

22 A That is correct.

23 Q And do you work for Google in the City of
24 New York?

25 A I do, yes.

1 Q What's the location of Google's office in
2 New York where you live?

3 A In New York it's 111 8th Avenue.

4 Q Have you ever been deposed before?

5 A I have not, no.

6 Q Is there anything that you would prevent
7 you from testifying truthfully today? Medication?
8 Illness?

9 A No, there is not.

10 Q And do you understand that you're here to
11 testify regarding Google's dashboards for display
12 advertising?

13 A Yes.

14 Q And do you have personal knowledge of the
15 Google's dashboards that are used in the display
16 advertising business?

17 A I do.

18 Q And how did you come by that knowledge?

19 A As a software engineer at Google working
20 within display ads business, I have seen the some of
21 the dashboards that are used in this business.

22 Q Would you say that you are one of the most
23 knowledgeable people at Google regarding dashboards
24 for display advertising?

25 A I would say I have a very good

1 understanding of the dashboards that are used at
2 Google.

3 Q What is your current title at Google?

4 A My current title is staff software
5 engineer.

6 Q And when did you start working at Google?

7 A I started working at Google full time in
8 January of 2013, but I was an intern the previous
9 summer.

10 Q And in 2013 what was your title at Google?

11 A Software engineer.

12 Q Is that different than staff software
13 engineer?

14 A That's correct, yeah.

15 Q What were your responsibilities circa 2013
16 as a software engineer at Google?

17 A Generally writing algorithms, writing code
18 for various products within the reporting team, and
19 within the ad management team.

20 Q When you say the reporting team, what's
21 that?

22 A The reporting team is a subteam within the
23 ad manager product that provides various analytical
24 and just raw data to the publisher and, you know,
25 the customers of ad manager.

1 Q Do you provide that raw data to any other
2 teams at Google?

3 A Sorry. When you say with "other teams,"
4 do you mean other teams outside of ad manager?

5 Q Correct, yes.

6 A Other teams may use the data ad manager
7 team uses, yes. I would -- but the main custom of
8 our -- of our team is the Google the customer of ad
9 manager, so people outside of Google.

10 Q And do you have a sense of how large the
11 ad manager team is at Google?

12 A [REDACTED]

13 Q And again, I want to make sure we've got
14 the right context.

15 A Sure.

16 Q This was circa 2013?

17 A Oh, sorry. Excuse me. I'm speaking as of
18 now.

19 Q Okay.

20 A Yes. So are you asking about 2013?

21 Q Well, let's -- let's finish talking about
22 now and --

23 A Sure.

24 Q -- and then we can jump back.

25 A Understood.

1 Q So as of today you're working as a staff
2 software engineer as part of the reporting team --

3 A Yes.

4 Q -- in the ad manager product group?

5 A That's correct, yup.

6 Q And there are -- I think you said [REDACTED]
7 [REDACTED] on the ad manager team?

8 A Yup.

9 Q How many people in the reporting group?

10 A I think it's [REDACTED]; somewhere in
11 that range. I don't -- I'm not sure of the exact
12 number.

13 Q Do you have any people that report to you?

14 A I do not, no.

15 Q And who do you report to?

16 A I report to [REDACTED].

17 Q And what's his title?

18 A He is an engineering director.

19 Q And back in 2013, did you have a similar
20 role?

21 A Yes. I was also I was a software engineer
22 at the time. And I worked in the reporting team;
23 however, the product was not called ad manager at
24 that time.

25 Q What was it called in 2013?

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1 A The product I worked for was called the ad
2 exchange.

3 Q Can you tell me in your own words what a
4 dashboard is in the context of display advertising.

5 A Sure. I mean, a dashboard, generally
6 speaking, is just a visual representation of some
7 underlying data.

8 Q And in the context of display advertising,
9 what does Google use dashboards for?

10 MR. MCCALLUM: Object to the form.

11 A Generally speaking, dashboards are used
12 within various subteams for various, you know, ways
13 of representing data in a visual form. There's
14 never -- there's no clear purpose or reason to have
15 a dashboard.

16 Q Can you give me some example of subteams
17 in ad manager that used dashboards?

18 A I mean, any team, subteam, any individual
19 within Google can create a dashboard.

20 Q Is that something you assist them in
21 doing?

22 A No. Teams generally -- it is general a
23 self-service product.

24 Q So an engineering team in the ad manager
25 group -- they could create a dashboard?

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1 A Yes. Absolutely.

2 Q The finance team and ad manager can create
3 a dashboard?

4 A Yes.

5 Q Do you -- in all your work to Google from
6 2013 to the present, do you have any personal
7 experience developing dashboards for display
8 advertising?

9 A Can you clarify what you mean by "for
10 display advertising."

11 Q Yes. I guess -- well, maybe I can --
12 maybe I'll try to make it simpler and simply say:
13 In your work from 2013 to the present, have you
14 created or worked on creating any dashboards for the
15 ad manager group?

16 A In my time at Google I have created
17 dashboards for products that I have built or worked
18 on within the ad manager team.

19 Q What -- what were the names of those
20 dashboards?

21 A The names were more likely specific to
22 products that I was building. One -- I can't tell
23 you the exact name of the dashboard.

24 [REDACTED]

25 [REDACTED]

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1 [REDACTED] However, the exact name of
2 that dashboard I cannot -- I cannot say.

3 Q Do you have any personal experience using
4 dashboards in the context of display advertising?

5 A I do not know exactly what you mean by in
6 the context of display advertising.

7 Can you please clarify.

8 Q Well, a dashboard that represents
9 underlying display advertising data.

10 A Yes. I do have some knowledge of creating
11 a dashboard that represents underlying display
12 advertising data.

13 Q Oh, and I'd like hear, if you can, tell me
14 about those dashboards you created, but I'm -- I'm
15 also interested in you -- whether you have you used
16 such dashboards.

17 A At various points, yes, I have looked at
18 such dashboards.

19 Q And what dashboards have you looked at?

20 A Off the top of my head I cannot -- I
21 cannot name all of them.

22 Q Well, can you name some of them?

23 A I believe Lumina was one the dashboards I
24 looked at one point in my -- in the last ten years
25 at Google; however, a more recent dashboard I cannot

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1 say as the underlying data is more relevant to me
2 than any given dashboard.

3 Q Are you aware of any dashboards that are
4 currently being used at Google that reflect
5 underlying display advertising data?

6 A These dashboards are used by subteams and
7 maybe individuals; however, I am not aware of any
8 that are used on a wider, you know, scale within
9 display systems.

10 Q It's -- so can you name one dashboard that
11 currently is being used at Google?

12 MR. MCCALLUM: Object to the form.

13 A I would have to ask individual product
14 teams for the dashboards that they use.

15 Q But you're not aware of any dashboards
16 that are currently being -- being used by any of
17 those teams at Google?

18 A I cannot tell you off the top of my head
19 the exact dashboards that are being used.

20 Q Can you tell me any dashboards being used
21 by the ad manager team -- sorry. Let me think --
22 let me strike that.

23 Can you tell me whether any
24 dashboards exist whether or not they're being used
25 that reflect underlying display advertising data.

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1 A Yes. I am sure there are some dashboards
2 that exist that represent underlying data. As to
3 accuracy of those dashboards, I cannot tell you.

4 Q Can you tell me the names of any of those
5 dashboard?

6 A I believe I said earlier Lumina was one.
7 I do not know how relevant that dashboard still is
8 today.

9 Q When did you visit the Lumina dashboard
10 last?

11 A Perhaps several months ago.

12 Q And did it show you current data as of
13 several months ago, or --

14 A [REDACTED]

15 Q What was the data it was displaying?

16 A [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 Q Is there a way to filter data in Lumina so
20 that you can see historical data?

21 A [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 Q And do you know what the underlying data
25 source used by the Lumina dashboard is?

Page 15

1 A [REDACTED]

2 Q [REDACTED]

3 A [REDACTED]

4 Q If you wanted to find Google's revenue
5 for -- from display advertising over the last 30
6 days, what dashboard would you consult?

7 MR. MCCALLUM: Object to the form.

8 A I would not consult a dashboard
9 personally. I would just go to the underlying data
10 sources.

11 Q If there -- is there a finance team in --
12 in the ad manager group?

13 A There is, yes.

14 Q Do you know if they have a dashboard?

15 A [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 Q And you mentioned [REDACTED]

21 [REDACTED]?

22 A I believe so. [REDACTED]

23 [REDACTED]

24 Q What is [REDACTED]?

25 A [REDACTED]

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1

Q [REDACTED]

2

[REDACTED]?

3

A [REDACTED]

4

[REDACTED].

5

Q

Is there a particular team at -- at Google
as part of that ad manager that is tasked with
creating dashboards?

8

A

No.

9

Q

Does Google maintain a directory of
dashboards related to its display advertising
business?

12

A

No, it does not.

13

Q

How do you know that?

14

A

Data at Google -- there's generally --
not -- speaking is not stored in a directory.
It's-- you know, these -- these dashboards are
generated by individuals, they are, you know, at the
discretion of the individual who created them.

19

There's no central repository that
every dashboard is cataloged and maintained.

21

Q

Does Google maintain any documents that
list out dashboards related to display advertising?

23

A

At one point in time maybe a document may
have been created that contained relevant dashboards
for that specific point in time or specific product

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1 or specific, you know, questions that were relevant
2 at the time, but I am not aware of any document that
3 just -- that maintains a list of all working and
4 operated dashboards across -- or across the display
5 business.

6 Q Have you ever seen any documents that list
7 out dashboards related to display advertising at any
8 point in time?

9 A I'm sure I've seen a document at some
10 point in time that -- that had a link to a dashboard
11 in it.

12 Q When was that, would you say?

13 A I -- I can't recall. I mean, sometime
14 over the last ten years.

15 Q Are you familiar with the URL,
16 [REDACTED]?

17 A I -- I am not entirely -- I cannot tell
18 you exactly what the -- that URL would lead to.

19 Q Have you ever visited that URL?

20 A I -- I don't recall ever typing that URL
21 into search.

22 Q How about the link,
23 [REDACTED].

24 A I don't believe I've ever directly typed
25 that link into -- into a browser.

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1 Q So you don't know what would be found at
2 that link?

3 A I cannot tell you specifically, no.

4 Q Do you know if there are DRX business
5 dashboards active today at Google?

6 A There are business dashboards. Can you
7 please explain or clarify what you mean by business
8 dashboard.

9 Q Well, I guess it -- [REDACTED]
10 [REDACTED], so I was hoping you -- you
11 could enlighten me, but -- but let me try to ask it
12 a different way.

13 Are there dashboards currently
14 operational at Google that track business metrics
15 for DRX?

16 A [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]

22 Q And when -- when did you view those
23 dashboards?

24 A I viewed them last Friday.

25 Q And what were the names of those

Page 19

1 dashboards?

2 A I cannot recall the exact name of the
3 dashboard off the top of my head.

4 Q Do you have a -- do you have a sense of
5 what it was called?

6 A Yeah. [REDACTED]

7 [REDACTED]
8 I -- I may be slightly wrong.

9 Q Let me maybe try to come at it from that
10 angle. So -- and I want to be clear when I ask
11 these -- this following set of questions about your
12 preparation for this deposition. I'm not asking for
13 communications you might have had with your
14 attorney.

15 A Okay.

16 Q But what did you do to prepare for your
17 deposition today?

18 A Other than speaking with counsel, I spoke
19 with [REDACTED], who is an analyst and ad manager,
20 and [REDACTED] who is a member of the finance team.

21 Q And what did you speak would Mr. [REDACTED]
22 about?

23 MR. MCCALLUM: Objection. Privilege.

24 I think counsel is not asking for
25 communications that you had in the presence of

1 counsel.

2 MR. MCBRIDE: Yes, that's correct.

3 Q To the extent you had a conversation with
4 Mr. [REDACTED] or Mr. [REDACTED] outside the presence of
5 counsel, can you let me know what you said.

6 A I have not spoken with them outside of the
7 presence.

8 Q Other than speaking with them, did you do
9 anything else to prepare for your deposition?

10 A No, I did not.

11 Q Did you look at any documents?

12 A Only in the presence of counsel.

13 Q How many documents did you look at?

14 A In the presence of counsel, a handful.

15 Q More than five?

16 A About five.

17 Q And did any of those documents refresh
18 your recollection on -- on anything?

19 A No.

20 Q Did you look at any dashboards in
21 preparation for your deposition today?

22 A Yes, I did.

23 Q How many dashboards?

24 A Again, maybe around five.

25 Q Were those -- and can you tell me the

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1 names of any of those dashboards.

2 A [REDACTED]

3 [REDACTED]

4 Something along those lines.

5 Q [REDACTED]

6 [REDACTED]?

7 A [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 Q How about the -- [REDACTED]

11 [REDACTED]

12 [REDACTED].

13 A Yeah. [REDACTED]

14 [REDACTED] things like that.

15 Q How about the [REDACTED]?

16 A [REDACTED].

17 Q So what about the other dashboards you

18 looked at? [REDACTED]

19 [REDACTED]?

20 A [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED].

24 MR. MCBRIDE: This is what we get when my

25 helper gets sick. I apologize. Just give me a

Page 22

1 minute. We'll have to come back to that one.

2 I'm going to hand to you what -- what's
3 going to be marked as State's Exhibit 1 and
4 because this was printed from a native file, I
5 will represent that this is the doc- --
6 multi-paged document, bearing the Bates Number
7 GOOG-AT-MDL-003985866.

8 (Whereupon, GOOG-AT-MDL-003985866, State's
9 Exhibit 1 was marked for Identification.)

10 Please take a quick look through that.
11 And then when you're ready I'd ask to you turn
12 to page to -- well, let me know when you've
13 taken a minute to look at it.

14 MR. MCCALLUM: I would just note for the
15 record that the font is rather small on the
16 first page.

17 Is the witness able to read the document?

18 THE WITNESS: Yeah. I believe I could
19 make out.

20 Q And if you'd had a chance to review it,
21 the first question I have for you is: Have you ever
22 seen this document before?

23 A I have never seen this document before.

24 Q If you turn to page 3 of the document,
25 that's the one with the first line that says

1 " [REDACTED], " and then next to it there's a
2 link [REDACTED] --

3 A Uh-huh.

4 Q -- do you see that?

5 A I do see it.

6 Q And just in an attempt to short-circuit
7 this somewhat and not have me read you everything on
8 this page, I was wondering if you could read through
9 that page tell me if any of these links look
10 familiar to you, or you can tell me if you've ever
11 visited any of them.

12 A I do not -- Lumina is one I can
13 confidently say I visited. As for the rest I may
14 have visited them. I don't remember -- I don't
15 recall every go link that, you know, has ever
16 existed at Google. I mean, those are again are
17 created by Google -- Google employees at their own
18 discretion, so you know, there may have been --
19 there could be multiple links for the same thing.

20 I don't -- I cannot tell you if I've
21 visited these exact links or not.

22 Q How about the [REDACTED]? Is that
23 something you may have visited?

24 A I believe that was something that I
25 visited in preparation.

Page 24

1 Q So on -- on Friday?

2 A Yes.

3 Q Have you worked with something called [REDACTED]
4 [REDACTED] at Google?

5 A Yes, I have worked with [REDACTED].

6 Q What is [REDACTED]?

7 A [REDACTED] is a database, generally
8 speaking, for the display ad business.

9 Q And what data is contained in that
10 database?

11 MR. MCCALLUM: Objection. Is beyond the
12 scope.

13 The witness can answer.

14 A [REDACTED]
15 [REDACTED].

16 Q Can you give me an example of -- of a
17 particular field in the [REDACTED] database.

18 A [REDACTED]
19 [REDACTED]
20 [REDACTED].

21 Q Does it contain financial information?

22 A What do you mean by "financial
23 information"?

24 Q The cost of an impression, the amount of a
25 bid -- the revenue that Google generates from an

Page 25

1 impression.

2 A [REDACTED]

3 [REDACTED].

4 Q [REDACTED]

5 [REDACTED]?

6 A [REDACTED].

7 Q Have you worked with something called
8 [REDACTED] at Google?

9 A Yes.

10 Q What is [REDACTED]?

11 A [REDACTED] is an infrastructure, a paradigm for
12 processing large amounts data.

13 Q Is [REDACTED] something you use in -- in your
14 day-to-day job at Google?

15 MR. MCCALLUM: Object. Is beyond the
16 scope.

17 A Yes, it is.

18 Q Is [REDACTED] used in connection with any of
19 the dashboards that you have visited?

20 A [REDACTED]

21 [REDACTED]

22 [REDACTED]?

23 Q Correct.

24 A [REDACTED]

25 [REDACTED]

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1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED].

5 Q Can you give me an example of [REDACTED]
6 [REDACTED].

7 A Sure. You know, [REDACTED]
8 [REDACTED]
9 [REDACTED].

10 Q Are you familiar with something called
11 [REDACTED] at Google?

12 A Yes, I have -- I have -- I am familiar
13 with [REDACTED].

14 Q And what is [REDACTED]?

15 A [REDACTED]
16 [REDACTED].

17 Q When you say [REDACTED]
18 [REDACTED]?

19 MR. MCCALLUM: Object. That's beyond the
20 scope.

21 A [REDACTED]
22 [REDACTED]
23 [REDACTED].

24 Q Do you know if there are any dashboards at
25 Google that [REDACTED]

Page 27

1 [REDACTED]?

2 A I cannot tell you a dashboard off the top
3 of my head [REDACTED].

4 Q Have you worked with something called
5 [REDACTED] at Google?

6 A I am aware of the name. I cannot tell you
7 specifically if I worked directly with them.

8 Q Do you know what [REDACTED] is?

9 MR. MCCALLUM: I object. That's beyond
10 the scope.

11 A I cannot tell you exactly what the scope
12 of [REDACTED] is.

13 Q Do you know if there are dashboards that
14 rely on [REDACTED]?

15 A I can speculate, but no, I cannot tell you
16 definitively.

17 Q You mentioned earlier something called
18 [REDACTED]. Do you know what that stands
19 for?

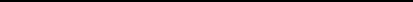
20 A Again, I can speculate what that stands
21 for. But I mean --

22 Q Well, as much I hate to invite
23 speculation, if you an idea it probably would be
24 more informed than mine, so....

25 MR. MCCALLUM: Object to the form.

1 A If I were to take a guess at [REDACTED]
2 [REDACTED]. Something along
3 those lines. However, again, just speculation it
4 may be completely unrelated.

5 Q Are you aware that there are

6 |  ?

7 MR. MCCALLUM: Object to form.

8 A I am aware that different teams have
9 different dashboards that they use for their team.

10 Q But you can't tell me whether the names
11 of -- or the number of dashboards that the sales
12 team in the ad manager group might have?

13 MR. MCCALLUM: Object to the form.

14 A I cannot tell you specifically how many or
15 exact, you know, dashboards that a given member of a
16 sales team would use.

17 Q And can you name any of the dashboards
18 that a member of the sales team would use?

19 MR. MCCALLUM: Object to the form.

20 A No, I cannot.

21 Q Are you familiar with something called
22 [REDACTED] ?

23 A [REDACTED] ?

24 Q Correct.

25 A I'm not aware of what that is. Again, I

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1 may have seen the dashboards, but I do not remember
2 go link.

3 Q How about the go link [REDACTED]?

4 Do you know what that is?

5 A I am not aware what that is.

6 (Whereupon, GOOG-DOJ-AT-01859616 through
7 1859621, State's Exhibit 2 was marked for
8 Identification.)

9 Q All right. You should have received
10 what's been marked as State's Exhibit 2. This is a
11 multipage document with Bates range
12 GOOG-DOJ-AT-01859616 through 1859621.

13 Do you have that document?

14 A Not --

15 Q Oh, not yet. All right. And after you've
16 had a chance, just take a look at it and let me
17 know.

18 A Okay.

19 Q Have you seen this document before?

20 A This is the first time I've seen this
21 document.

22 Q On the first page there's an author
23 listed, [REDACTED].

24 Is that name familiar to you?

25 A No, it is not.

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1 Q How about any of the collaborators and
2 reviewers?

3 A Nope.

4 Q If you turn to the second page of this
5 document, the one that ends Bates Number 1859617.
6 When you look at the first paragraph -- let me know
7 when you're there.

8 A I'm there.

9 Q It reads " [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]."

13 Can you -- do you know what XPP is?

14 A I do not know what that [REDACTED] is.

15 Q How did about [REDACTED]? Does that stand
16 for [REDACTED]?

17 A From my understanding [REDACTED]
18 [REDACTED] I
19 would have to double-check that.

20 Q The next sentence reads, [REDACTED]

21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED].

25 Do you see that?

Page 31

1 A I do see that.

2 Q This reference to [REDACTED]

3 [REDACTED].

4 Have you ever reviewed a dashboard

5 [REDACTED]

6 [REDACTED]?

7 A I have not.

8 Q Do you know if the [REDACTED]
9 dashboard is operational today?

10 A I do not.

11 Q How about the [REDACTED]?

12 A I cannot tell you if it is maintained.

13 Q Are you familiar with something called
14 [REDACTED] at Google?

15 A No, I am not.

16 (Whereupon, GOOG-AT-MDL-00177683 through
17 1776868, State's Exhibit 3 was marked for
18 Identification.)

19 Q I'm handing what has been marked as
20 State's Exhibit 3. It's a multipage document,
21 bearing the Bates range GOOG-AT-MDL-00177683
22 through 1776868.

23 Do you have that document? Did I
24 misspeak?

25 MR. MCCALLUM: Could we have a copy,

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1 Counsel?

2 MR. MCBRIDE: Oh, pardon me. Sorry.

3 MS. BOSCO: Thank you.

4 Q All right. Let them know when you've had
5 a chance take a look at that document.

6 A Okay.

7 Q Have you ever seen this document before?

8 A I have not, no.

9 Q The title is -- begins, [REDACTED]

10 [REDACTED].

11 Do you see that?

12 A I do.

13 Q Are you familiar with [REDACTED]

14 [REDACTED]?

15 A No, I am not.

16 Q Do you know if such a dashboard exists?

17 A No, I do not.

18 Q There's a Number 23 -- if you look under
19 the title, there's a line that says written by and
20 then --

21 A Uh-huh.

22 Q -- a name spanning two lines. Do you
23 recognize any of those names?

24 A I do not, no.

25 Q If you turn to the third page of the

Page 33

1 document; the one that ends with the Bates 1776865.

2 Let me know when you're there.

3 A I'm there.

4 Q This is -- there's a Section 3, and the

5 heading there is [REDACTED]

6 [REDACTED].

7 Do you see that?

8 A I do.

9 Q And then under that there's a first

10 section heading that says [REDACTED]

11 [REDACTED].

12 Do you see that?

13 A Yes.

14 Q Then it says [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 Do you see that?

18 A Uh-huh.

19 Q Under [REDACTED]

20 [REDACTED]

21 [REDACTED].

22 Do you see those?

23 A I do.

24 Q Are you familiar with a dashboard

25 currently active with Google that has the metrics

Page 34

1 revenue, impressions, CPM?

2 A Can you -- can you define what you mean by
3 currently active.

4 Q Well, a dashboard that someone could visit
5 today.

6 A You mind clarifying that further. Like,
7 about the quality of the data that is in that
8 dashboard.

9 Q Yeah, I guess. Fair enough. Is there a
10 dashboard that someone can visit today that contains
11 current information on revenue impression and CPM?

12 A Whatever dashboard that have these --
13 excuse me -- those -- these key metrics [REDACTED] would
14 have to be maintained, so I cannot tell you
15 specifically which dashboards are actively
16 maintained at Google. [REDACTED]

17 [REDACTED] however,
18 to -- to give you a name of specific dashboard that
19 has accurate numbers for these metrics, I -- I
20 cannot tell you off the top of my head.

21 Q Is there someone who would know which
22 dashboards are actively maintained at Google?

23 A You would have to ask everyone at Google
24 which dashboards they personally maintain, and then
25 they could probably tell you specifically about

1 | their own dashboards.

2 Q Are there dashboards that individual teams
3 maintain independent from a particular person?

4 A Generally speaking, dashboards are built
5 by people. Then they will share them with people,
6 and they may prove useful and have some utility
7 within a certain context. And other people may use
8 them for a period of time, and then they may lose
9 relevance and they may not be relevant anymore and
10 no longer maintained.

11 Q Have you ever worked with something called
12 [REDACTED]?

13 A The name sounds familiar, but I can't tell
14 you, you know, any specific moment in time that I
15 used it.

16 (Whereupon, GOOG-AT-MDL-004284856 through
17 004284870, State's Exhibit 4 was marked for
18 Identification.)

19 Q You should have now what's been marked
20 State Exhibit 4 this is a multipage document bearing
21 the Bates range GOOG-AT-MDL-004284856 through
22 004284870

23 Do you see that?

24 A I do, yup.

Q I'll give you a minute to look at it, but

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1 I'd like you to tell me if you've ever seen this
2 document before.

3 A No, I have not seen this document before.

4 Q If you turn to page 9 of the -- of the
5 document. That's the one ending in Bates Number
6 4284865.

7 A Okay.

8 Q If you go down to the bottom of this page,
9 there's a heading "dashboards."

10 A Yup.

11 Q Do you see the first entry under there is
12 [REDACTED] (tool for finding tools...)

13 Do you see that?

14 A I do.

15 Q Does that refresh your recollection as to
16 what [REDACTED] is?

17 A No.

18 Q Have you ever used [REDACTED] do try to
19 find a tool?

20 A No.

21 Q If you turn to the next page, page 10,
22 that's the one ending in Bates Number 4284866. You
23 see at the very top there's the text, shows overall
24 [REDACTED] ?

25 A Yup.

1 Q [REDACTED].

2 Do you see that?

3 A I do.

4 Q Do you know if that is a dashboard that's
5 currently active at Google?

6 A It is not something that I've heard of, if
7 ever, in a very long time.

8 Q So you don't know if it's currently active
9 or not?

10 A I have not heard of anyone still using
11 this dashboard.

12 Q If you go down a little bit there's
13 something that says, [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 A Uh-huh.

17 Q And underneath that http://go/adxTrends.

18 Do you see that?

19 A I do.

20 Q Are you familiar with that?

21 A I am not.

22 Q With that link?

23 A No, I am not.

24 Q And you don't know if that's active today
25 or not?

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1 A It is not something that I've ever of or
2 seen in a very long time. Again, if ever.

3 Q The next entry says [REDACTED]
4 [REDACTED] Then there
5 are two links under that entry, [REDACTED]
6 [REDACTED] a -- a lengthier entry that I will not read
7 to spare the court reporter, but it -- it says
8 [REDACTED]
9 [REDACTED]

10 Do you see that?

11 A I do see that.

12 Q Are you familiar with either of those
13 links?

14 A No. And again, maybe at some point I may
15 have seen the dashboards but the links themselves --
16 no, I'm not familiar with them.

17 Q When you say you may have seen the
18 dashboard, are you aware of a publisher dashboard
19 that shows inventory and revenue?

20 A I am not aware of any dashboard currently
21 that is used across the Ad Manager team that will
22 show these stats.

23 Q Well, I guess my question is not whether
24 its used across Ad Manager team, but whether you are
25 aware of any dashboards that show publisher

1 inventory and revenue.

2 A At this point I am not aware of any
3 dashboard that I would rely on to get revenue and
4 publisher information from.

5 Q But I thought you testified before, right,
6 that you're not interesting in the dashboards; just
7 the underlying data. Is that correct?

8 MR. MCCALLUM: Object to the form.

9 A I would not sat that I am not interested
10 in the dashboards. Is that I trust myself to query
11 the underlying data more accurately than I would
12 rely on another person at Google to maintain a
13 dashboard forever. So it is --

14 Q But -- please finish.

15 A I would just say it is easier for me to
16 query the data myself, then it is to go and track
17 down whether or not a dashboard was actively being
18 used.

19 Q But there are teams at Google and
20 individuals at Google who are not as familiar with
21 raw data as you are, correct?

22 A I would -- individuals at Google. Do you
23 mean within engineering?

24 Q I mean, individuals who work on the
25 Ad Manager -- as part of the Ad Manager team.

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1 A I would say any engineer at Google would
2 be more comfortable querying the data than tracking
3 down whether or not a dashboard is actively
4 maintained.

5 Q But my question is not about engineers,
6 but about people in sales, finance, product managers
7 and the like.

8 A As -- as far as I'm aware people that do
9 not have the ability to query the data, such as
10 certain members of the sales force, may have support
11 teams that have that technical skill and can create
12 dashboards that are relevant to them for a period of
13 time; however, they are not commonly maintained and
14 it could be thousands of dashboards, each one used
15 for a specific reason for a specific product that's
16 currently being launched.

17 However, I am not aware of any one
18 dashboard created by these support teams that is
19 maintained forever.

20 Q My question is not whether it's maintained
21 forever. It's whether there are any that are active
22 today.

23 A I can speculate, but -- and from the --
24 the display -- the ones that I mentioned before [REDACTED]
25 [REDACTED], I believe the name was -- stuff like

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1 that. I believe those are currently being used, but
2 you would have to talk -- again, to those specific
3 product teams and each individual product team to
4 see what dashboards they actively maintain and use.

5 Q So you said you looked at maybe five
6 dashboards?

7 A Uh-huh.

8 Q And you told me the names of two them.
9 Can you tell me the names of others.

10 A Off the top of my head, no.

11 Q Can you tell me the names of the groups
12 that used those five dashboards?

13 A I believe the finance team uses those
14 dashboards. I believe, yeah.

15 Q Are you familiar with something called
16 RASTA?

17 A I am aware of -- yes, I am aware of RASTA
18 is.

19 Q What is RASTA?

20 A RASTA -- as far as to my knowledge, RASTA
21 is that [REDACTED]

22 Q Can you give me an example of an
23 experiment.

24 MR. MCCALLUM: Object. That's beyond the
25 scope.

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1 A Generally speaking, [REDACTED]

2 [REDACTED]. [REDACTED]

3 [REDACTED]

4 Q Do you know what RASTA stands for?

5 A I cannot tell you what the acronym stands
6 for, no.

7 Q Do you have any reason to doubt it's
8 reliable ads stats tracking architecture?

9 MR. MCCALLUM: Objection to form.

10 A I cannot tell you what it stands for.

11 Q Do you know when RASTA was first
12 implemented?

13 MR. MCCALLUM: Object. That's beyond the
14 scope.

15 A I cannot tell when was RASTA was
16 implemented.

17 Q Have you ever used RASTA?

18 A I have not directly used RASTA. And I
19 should mention that RASTA is [REDACTED].

20 (Whereupon, GOOG-AP-MDL-004017319 through
21 004017350, State's Exhibit 5 was marked for
22 Identification.)

23 Q You should have what has been marked as
24 Google -- I'm sorry -- State's Exhibit 5. This is a
25 multipage document with the Bates

1 GOOG-AP-MDL-004017319 through 004017350.

2 | Do you have that document?

3 A Yes, I do.

4 Q I'll give you a moment to look at it, but
5 have you ever seen it before?

6 A Yes, I have.

7 Q When did you see this?

8 A I saw it last Friday.

9 Q And before last Friday have you ever seen
10 it before?

11 A No, I have not.

12 Q Are you aware of any errors in this
13 document?

14 MR. MCCALLUM: Object to the form.

15 A I -- I -- I -- at first glance I cannot --
16 I am not aware of any errors. I'm not saying that
17 there aren't any, but I'm not aware of it.

18 Q If you turn to -- well, I'll give you
19 Bates page -- the Bates number. It's 4017345. That
20 is maybe six pages from the back. It's the one with
21 the slide titled [REDACTED]

22 A Okay.

23 Q Do you see that?

24 A I do.

25 O Are you familiar with [REDACTED] ?

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1 A No, I am not.

2 Q Do you have any reason to doubt that it is
3 an [REDACTED]?

4 MR. MCCALLUM: Object to the form.

5 A Many things change at Google. I cannot
6 tell you whether or not this experiment is it still
7 running or not.

8 Q Do you have any reason to doubt that

9 [REDACTED]
10 [REDACTED]?

11 MR. MCCALLUM: Object to the form.

12 A Perhaps at the time of writing this
13 document, whoever the author was, for whatever
14 project they were working on, this was useful.

15 However, I cannot say if today this
16 would be relevant.

17 Q And you see there is a footnote that says

18 [REDACTED]
19 [REDACTED]
20 [REDACTED]

21 Do you see that?

22 A I do.

23 Q And Lumina was a dashboard that you
24 referenced earlier?

25 A Yes.

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1 Q How about the link [REDACTED] ?

2 I know you mentioned [REDACTED] before.

3 Do you know what I would -- what one
4 would get to if they typed in that -- that go link?

5 A I can speculate, but no, I cannot.

6 Q Is there a -- is there an -- is there a
7 DRX internal stats dashboard?

8 A [REDACTED]

9 Q Is there a mechanism for people -- or
10 interface where people can query DRX internal stats
11 by applying various filters to various metrics?

12 A [REDACTED]
13 [REDACTED]
14 [REDACTED].

15 Q Is there a common interface that people
16 use to access DRX internal stats?

17 A [REDACTED]
18 [REDACTED].

19 Q I'm asking if there's one that us the most
20 frequently used.

21 A I will not say that there is one that
22 is -- I -- I cannot enumerate all possible [REDACTED]
23 in -- in just internal stats data, so I cannot tell
24 you which one is most commonly used.

25 Q Can you tell me any that you believe are

Page 46

1 commonly used.

2 A I believe [REDACTED], as you mentioned before,
3 is commonly used to [REDACTED].

4 Q Anything else?

5 A I believe [REDACTED]

6 [REDACTED] ll.

7 Q Any web-based tools?

8 MR. MCBRIDE: Object. That's beyond the
9 scope.

10 A I mean, [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 MR. MCCALLUM: We're just coming up to an
15 hour on the record, Counsel, so whenever you
16 want --

17 MR. MCBRIDE: Now is perfectly fine to
18 take a break if that's --

19 THE VIDEOGRAPHER: The time right now is
20 3:04 p.m. and we are off the record.

21 (Whereupon, a recess was taken.)

22 THE VIDEOGRAPHER: The time right now is
23 3:18 p.m. and we're back on the record.

24 (Whereupon, GOOG-AT-MDL-012699778 through
25 12699811, State's Exhibit 6 was marked for

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1 Identification.)

2 Q All right. You should have received what
3 has been marked as State's Exhibit 6. It's a
4 multipage document bearing the Bates Number
5 GOOG-AT-MDL-012699778 through 12699811.

6 Do you have that document?

7 A I do, yes.

8 Q Take a look at it for a moment and let me
9 know if you've ever seen it before.

10 A I don't believe I've seen this document
11 before.

12 Q The author is listed as [REDACTED] on
13 the very first page.

14 A Yup.

15 Q Do you know who that is?

16 A I do, yes.

17 Q Who is she?

18 A She's a UX researcher.

19 Q And what does a UX researcher do?

20 A They look at the user's behavior that --
21 people that use their products, their behavior, and
22 they give analysis on, you know, how to better
23 improve our products.

24 Q I'm sorry if I asked. Have you seen this
25 document before?

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1 A I have not. At least not that I'm --
2 nothing that comes to mind.

3 Q So if you turn to the fifth page of the
4 document, that's the one that -- ending with the
5 Bates Number 12699782.

6 A Uh-huh.

7 Q Do you see that?

8 A I do.

9 Q I apologize. It's a little hard to read,
10 but the title of this slide is [REDACTED]

11 [REDACTED]
12 Do you see that?

13 A I do.

14 Q And then there are various teams listed.

15 Do you see that?

16 A I do, yeah.

17 Q The first one is [REDACTED]

18 A Yup.

19 Q Do you see that?

20 A I do.

21 Q Can you tell me what that -- that team or
22 teams is or are?

23 A Well, are you asking what the acronyms
24 stand for?

25 Q To start with, yes.

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1 A [REDACTED] stands for [REDACTED]. [REDACTED]
2 would be [REDACTED]. [REDACTED] given the context here,
3 I would assume stands for [REDACTED]; however, I
4 may be mistaken. But that is -- based on the
5 context that's what I'm assuming.

6 Q And these are -- these are members of the
7 Ad Manager team, the team you work on or -- I'm
8 sorry -- these -- these teams are part of
9 Ad Manager?

10 A These -- [REDACTED]
11 [REDACTED].

12 Q I see. So that's the team that you're on?

13 A Correct.

14 Q Then there's another team, [REDACTED]
15 [REDACTED].

16 Do you see that?

17 A Yes.

18 Q What -- what does that team do?

19 A I can speculate. I cannot tell you their
20 exact mission.

21 Q The next one is [REDACTED]
22 Do you see that?

23 A Uh-huh.

24 Q And underneath that, [REDACTED].
25 Do you know what those acronyms stand

Page 50

1 for?

2 MR. MCCALLUM: Object as beyond the scope.

3 A I believe [REDACTED] stands for [REDACTED]
4 [REDACTED]. [REDACTED] I can't -- I don't -- I don't recall
5 the exact meaning of the other two acronyms.

6 Q Do you know what the [REDACTED] team does?

7 A They support sales, I believe.

8 Q When you say "support sales," in an
9 engineering capacity?

10 MR. MCCALLUM: I object. That's beyond
11 the scope.

12 A [REDACTED]
13 [REDACTED]
14 [REDACTED] -- how much
15 [REDACTED] each member has.

16 Q And then the final -- the final set of
17 teams. [REDACTED].

18 A Correct.

19 Q Can you tell me what [REDACTED] stand
20 for?

21 A [REDACTED] [REDACTED]
22 is -- I don't recall the meaning of that acronym,
23 but...

24 Q Do you know what [REDACTED] does?

25 A I can't give you their exact mission.

1 Q If you turn to the next page, this is
2 [REDACTED].

3 Do you see that?

4 A I see it.

5 Q Can you tell me which of these -- well,
6 first can you tell me what a table is, is in -- in
7 the context of this slide?

8 A It doesn't seem like there is
9 consistent -- I cannot tell you specifically. I
10 mean, there's nothing consistent about all of these.

11 A table from this -- from this seems
12 to be either a [REDACTED], or it
13 seems it could also be [REDACTED]
[REDACTED]. Things like that.

15 Q Are any these things listed dashboards?

16 A I -- I can't tell you definitively what
17 these link to. Some of them I know are not
18 dashboards. I -- I can't tell you. I mean -- I
19 mean, I don't know every -- every link at Google.
20 There could be hundreds of thousands, if not
21 millions of links, but some of them are definitely
22 not dashboards.

23 Q Which ones are definitely not dashboards?

24 A The [REDACTED] is not a
25 dashboard. [REDACTED] is not a

1 dashboard.

2 Q Anything else?

3 A I am not familiar specifically with the
4 rest -- rest of these names here, and I cannot tell
5 you exactly where these hyperlinks go.

6 It's also being said -- I cannot -- I
7 cannot confirm that these hyperlinks -- if they were
8 clicked on, go to the table or what exactly it will
9 go to if clicked on.

10 Q If you flip ahead a few pages to the page
11 that ends in Bates Number 787. That's the slide
12 with [REDACTED], is the title.

13 A Yup, I'm there.

14 Q There are two individuals called out on
15 the left, [REDACTED] and [REDACTED].

16 A Yup, I see that.

17 Q Do you know either of those individuals?

18 A I know both of them.

19 Q Do you work with them?

20 A I do.

21 Q Did you speak with either of them to
22 prepare for your deposition today?

23 A I did not.

24 Q The title of this -- you go down a little
25 bit on the right-hand side there's in bold -- text

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1 in bold [REDACTED].

2 Do you see that?

3 A Yup, I see that.

4 Q And down at the -- down at the --

5 there's -- there's a [REDACTED] and [REDACTED]

6 [REDACTED] under that.

7 Do you see that?

8 A I see that.

9 Q Are you familiar -- the [REDACTED] one says

10 [REDACTED]

11 [REDACTED].

12 Do you see that?

13 A I see that.

14 Q Do you -- do you know what that's
15 referring to?

16 A Again, this is a hyperlink. I cannot tell
17 you specifically where this hyperlink takes you.

18 Q Are you familiar with reporting data
19 sources and dashboards created by the [REDACTED]

20 [REDACTED]

21 MR. MCCALLUM: Object to the form.

22 A Over my years at Google I have seen [REDACTED]
23 [REDACTED] and dashboards that the front end
24 team may have created that were relevant at various
25 periods of time; however, I cannot tell you what

1 this specifically is referring to.

2 Q Are you aware of any dashboards that are
3 currently operational displaying current data
4 created by the [REDACTED]?

5 A [REDACTED].

6 Q And what is that?

7 A [REDACTED]

[REDACTED]

[REDACTED]

10 Q And who -- who would I speak to if I
11 wanted to know which dashboards [REDACTED]
12 currently has?

13 A Would you have to speak to a member of
14 that team.

15 Q If you wanted to speak to someone on that
16 team about which dashboards they have, who would you
17 go to?

18 A [REDACTED] on this list would -- would probably
19 know.

20 Q Well -- I don't -- and I don't mean to
21 limit it to just people on this page. Is there --
22 is there someone else who would be more knowledgeable
23 than [REDACTED]?

24 A [REDACTED] is a very reliable individual.

25 Q And under -- if we go a little bit farther

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1 down this page there's dashboards [REDACTED] I can't
2 tell if that's a [REDACTED] I think it's a [REDACTED]
3 [REDACTED]?

4 A Yup.

5 Q And then finally [REDACTED]. Which
6 is proceeded by [REDACTED].

7 Do you see that?

8 A I do, yes.

9 Q Are you familiar with any of those links?

10 A These are not links that I personally use
11 often, no.

12 Again, there's thousands of links and
13 thousands of dashboards created by, you know, every
14 team. This is -- you know, I don't know when this
15 document was created, but...

16 Q If you turn two pages ahead. Really just
17 one page, because these are double-sided, but to the
18 page that ends in the Bates Number 789.

19 A Yup.

20 Q And the title -- the top of slide is [REDACTED]
21 [REDACTED].

22 Do you see that?

23 A I do.

24 Q And then there are a number of
25 individuals. Three individuals identified here.

1 [REDACTED].

2 A Uh-huh.

3 Q [REDACTED]

4 A Uh-huh.

5 Q And [REDACTED].

6 A Yup.

7 Q Are you familiar with any of those
8 individuals?

9 A I am familiar with all three.

10 Q And do you know what their -- what
11 their -- their job function or description is?

12 A [REDACTED] is my manager; [REDACTED]
13 [REDACTED]. [REDACTED] no longer works in the reporting team.
14 I do not know what she is currently doing.

15 And [REDACTED] I believe works on
16 the middle tier team. She's a software engineer.

17 Q And did you speak with your manager in
18 preparation for the deposition today?

19 A I did not.

20 Q Under -- and -- and towards the bottom of
21 slide there's a dashboard [REDACTED].

22 Do you see that?

23 A I do.

24 Q And that's the Lumina we've talked about
25 earlier today?

1 A Yup.

2 Q And it says it's maintained by
3 [REDACTED]?

4 A Correct.

5 Q Are you familiar [REDACTED]?

6 A I am.

7 Q Am I saying his name correctly?

8 A [REDACTED].

9 Q Is he still a member of your team?

10 A He is, yes.

11 Q Do you work with him?

12 A I do.

13 Q And what is his -- his job at Google?

14 A He is a software engineer as well.

15 Q Do you know if -- does he still maintains
16 Lumina?

17 A Lumina is [REDACTED].

18 Q How do you know that?

19 A Because he told me.

20 Q When did you tell you that?

21 A Many months ago.

22 Q What -- do you know when [REDACTED]

23 [REDACTED]

24 A I do not recall.

25 Q Do you know if Lumina was [REDACTED]

1

2 [REDACTED] A No. I do not know, but I don't think it
3 was.

4 Q But you don't know?

5 A But I do not know for sure.

6 Q Do you think [REDACTED] would know?

7 A He may know more but as -- I would imagine
8 he has similar knowledge as me.

9 Q If we turn to the next page. This is the
10 one that ends in Bates Number 790.

11 You see here it says [REDACTED]

12 [REDACTED]

13 A Yes.

14 Q Was -- was the Lumina dashboard pulling
15 from [REDACTED] ?

16 A From my understanding, yes, it was.

17 Q And does this picture that is showing
18 here -- is that consistent with your recollection of
19 what -- what Lumina would display?

20 A From the times that I looked at the Lumina
21 dashboards, yes. It would [REDACTED]

22 [REDACTED]

23 However, it wouldn't look exactly like this. I
24 think this is mocked up for this presentation.

25 Q On the right-hand side there's text --

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1 there's text that says [REDACTED].

2 Do you see that?

3 A Yup.

4 Q Are you familiar with what's being
5 referred to here?

6 A I cannot tell you what was in this
7 hyperlink -- the [REDACTED] I'm trying read the
8 titles of these.

9 Q I think the top one says [REDACTED]
10 [REDACTED].

11 A Uh-huh.

12 Q I think that the one to the right and
13 slightly below that says [REDACTED]
14 [REDACTED]. "

15 A Yeah. I believe it says [REDACTED]
16 [REDACTED]

17 Q Oh, there you go. Your eyes are sharper
18 than mine.

19 A I --

20 Q Are you familiar with any of these
21 dashboards?

22 A I'm not -- I've -- these are not
23 dashboards, again, that I use personally.

24 These look -- these look like
25 dashboards used by the product teams that built

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1 these various tools.

2 For example, [REDACTED]
3 at -- you know, we use -- you know, in a -- on our
4 [REDACTED], where you can go if you are an Ad
5 Manager customer. And this looks like a tool that
6 is perhaps helpful for a [REDACTED], 'cause it
7 looks like you are viewing the [REDACTED]
8 [REDACTED]. So how did you get to
9 [REDACTED]

10 That's just my speculation based on
11 this title. This, again, is a dashboard that was
12 used by a very specific team at Google that is
13 building these products, and so that is not
14 something we commonly use.

15 Q But you don't know how many people would
16 have access to any one of these dashboards, correct?

17 A No, I do not. I do not know the specific
18 controls that would monitor these dashboards.

19 Q Are -- are there tools that Google has
20 that monitors dashboards usage?

21 A Tools -- so monitoring as in Google
22 employees that go to dashboards?

23 Q That's correct.

24 A [REDACTED].

25 Q Is there someone who would know?

1 A I have never seen at Google a dashboard
2 that tracks sites -- internal sites that other
3 Google employee have visited.

4 Q I guess I wasn't asking about a dashboard.

5 I'm just wondering if there is a --
6 if there are tools that Google has that monitors the
7 usage of internal Google dashboards.

8 A [REDACTED].

9 Q Who do you think would -- would be able
10 to -- to say yes or no definitively?

11 MR. MCCALLUM: Object to the form.

12 A That is an impossible question to answer.

13 Q So it's just unknowable?

14 A How can you confirm the negative?

15 Q Have you read the complaint in this case?

16 A I have not read this specific complaint,
17 but I am aware of the complaint.

18 Q There's particular -- I'll call them
19 programs or conducts that -- that are -- that have
20 been identified in the complaint, including things
21 such as unified pricing rules, UPR, and reserve
22 price optimization, RPL.

23 A Uh-huh.

24 Q Are you familiar with unified pricing
25 rules or UPR?

1 MR. MCCALLUM: Objection. That's beyond
2 the scope.

3 A It is a product that I have, you know, I
4 have heard of. I cannot give you specifics on the
5 inner workings on that product.

6 Q Do you know if there are any dashboards
7 used in connection with UPR at Google?

8 A I cannot tell you yes or no to that
9 question.

10 Q Who -- who would I ask to learn if there
11 are dashboards that track UPR?

12 MR. MCCALLUM: Object to the form.

13 A Again, there's -- every team builds
14 dashboards for their own purposes, so if you're
15 asking about a dashboard that may be used for a
16 certain product, you would have to talk to people
17 that worked on that product and whether or not they
18 have built dashboards for that -- those purposes.

19 Again, there's thousands of
20 dashboards at Google. I cannot possibly remember
21 every single one that's at Google.

22 Q I guess I'm not -- I'm not asking about
23 every single one. I'm just -- I'm asking about ones
24 that relates to the conduct specific -- that was
25 specifically identified in the complaint, such as

1 UPR.

2 MR. MCCALLUM: Object. That's beyond
3 scope.

4 Q Did you do anything in your preparation
5 today to confirm whether there were any dashboards
6 related to UPR at Google?

7 MR. MCCALLUM: I'll object on privileged
8 grounds, and caution the witness that he is not
9 to disclose any discussions with counsel in the
10 context of his preparation for the deposition.

11 A I -- I don't have anything to say.

12 Q So you did not undertake any investigation
13 as to whether there are unified pricing rule
14 dashboards at Google?

15 A I have not.

16 Q How about reserve price optimization?

17 Have you undertaken any investigation
18 as to whether there are dashboards related to
19 reserve price optimization at Google?

20 MR. MCCALLUM: I'll object. It's beyond
21 the scope.

22 A I have not.

23 Q Have you ever undertaken any investigation
24 as to whether there are any dashboards relating to
25 Bernanke?

1 MR. MCCALLUM: Object. That's beyond the
2 scope.

3 A I have not.

4 Q Are you aware of any dashboards related to
5 Bernanke?

6 A I am not aware of any specific dashboards
7 related to Bernanke.

8 Q Did you undertake any investigation to
9 determine if there are any dashboards at Google
10 related to dynamic revenue share, or DRS?

11 MR. MCCALLUM: Object. That's beyond the
12 scope.

13 A I am not aware of any such dashboards.

14 Q And you didn't -- you didn't undertake any
15 investigation?

16 MR. MCCALLUM: Same objection.

17 A I did not take any -- I did not do any
18 investigation.

19 Q How about any investigation into whether
20 there are dashboards relating to exchange detection
21 for projects such as Poirot or Elmo?

22 MR. MCCALLUM: Objection. That's beyond
23 the scope.

24 A I am not aware of any dashboards.

25 Q And you did not undertake an investigation

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1 to determine if there were any such dashboards?

2 MR. MCCALLUM: Same objection.

3 A No, I have not.

4 (Whereupon, document created by

5 Mr. McBride, State's Exhibit 7 was marked for
6 Identification.)

7 Q All right. You should have now what has
8 been marked as State's Exhibit 7. Does -- it does
9 spill over onto the other side.

10 In an attempt to just to avoid me
11 having to read each one of these to you and ask you
12 about them --

13 A Uh-huh.

14 Q -- I'll just ask if you go through this
15 list, and if there is a link you recognize or a
16 dashboard name that you recognize, please -- please
17 let me know.

18 MR. MCCALLUM: Can I just get a
19 representation from counsel as to what
20 Exhibit 7 is?

21 MR. MCBRIDE: Exhibit 7 is a document that
22 I created two hours ago.

23 A To be clear, these links -- it is not -- I
24 cannot tell you if these go to dashboards. I can't
25 tell you specifically what -- you know, they -- you

1 know, what this link may lead to.

2 It's -- there are thousands, if not,
3 ten thousands -- maybe millions of dashboards at
4 Google. Millions of go links at Google. They're
5 all arbitrary and made by the individuals.

6 And, you know, I cannot have possibly
7 remembered all of them.

8 Q I don't want to interrupt if you're still
9 talking, but appreciating that caveat, if you could
10 look it tell me if any of these links are familiar
11 or if they names of any of the dashboards are
12 familiar.

13 A Again, these would not be names of
14 dashboards. These are simply just links and do not
15 represent what the links point to.

16 Q Wouldn't -- but isn't it Google's practice
17 to have the link be representative the thing it
18 points to?

19 MR. MCCALLUM: Object to form.

20 A Links can be created by any arbitrary --
21 you know, engineer. And they could say whatever you
22 want them to say.

23 Q But in your experience, aren't the -- the
24 names of the links descriptive of the place the link
25 takes you to?

1 A I would say yes, it would be helpful to
2 have a descriptive link, but in my experience at
3 Google, people oftentimes do not create descriptive
4 links.

5 I cannot tell you specifically what
6 any of these links point to.

7 Q How about there -- there are some starting
8 with Number 76. It says [REDACTED]
9 [REDACTED]?

10 A Uh-huh.

11 Q Are you aware any dashboards related to
12 header bidding?

13 A I believe in passing I have [REDACTED]
14 [REDACTED], but I have
15 not interacted with it in any meaningful way.

16 Q Do you know who I would talk to -- need to
17 talk to learn about the existence of any header
18 bidding dashboards at Google?

19 A I believe [REDACTED] was an engineer that
20 worked on [REDACTED], although I could be -- I
21 could be mistaken.

22 Q And what -- what team is [REDACTED] a
23 part of?

24 A He works under an Ad Manager.

25 Q How about open bidding dashboard? Are you

Page 68

1 familiar with any open bidding dashboards?

2 MR. MCCALLUM: Which number is that that
3 you're referring to, Counsel?

4 MR. MCBRIDE: 81 and 82.

5 A I -- I am not aware with what these --
6 these links are referring to.

7 Q Are you familiar with open bidding?

8 A I am familiar with it as a product.

9 Q And are you aware if there are any
10 dashboards related to open bidding at Google?

11 A I -- I cannot confirm or deny any
12 dashboard.

13 Q Did you do any investigation to determine
14 whether any such dashboards existed?

15 A No, I did not.

16 Q How about Numbers 83 through 85 all
17 including the word " [REDACTED] . " [REDACTED]
18 [REDACTED]

19 [REDACTED].

20 Do you see that?

21 A I do.

22 Q Are you familiar with -- with the RASTA
23 dashboards?

24 MR. MCCALLUM: Object to the form.

25 A I am -- again, RASTA [REDACTED]

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1 [REDACTED]. I am not familiar with what these links
2 would be referring to.

3 Q Do you know who I would -- who I should
4 ask if I wanted to learn what these RASTA dashboard
5 links refer to?

6 MR. MCCALLUM: Can -- can we get a
7 representation from counsel as to the origin of
8 the various entries on this document, given
9 that it's something that the States created.

10 MR. MCBRIDE: Yes, every one of these --
11 of these links is pulled from a Google
12 document.

13 In some cases the link is found in
14 multiple Google documents, but I will represent
15 that none of these are invented. They're all
16 taken from Google production documents.

17 MR. MCCALLUM: So it's a summary document
18 that counsel prepared based on produced
19 documents. Is that --

20 MR. MCBRIDE: That's correct.

21 MR. MCCALLUM: Okay. Thank you for that
22 clarification.

23 Q I'm sorry. Who -- who would I ask about
24 the existence of RASTA dashboards?

25 MR. MCCALLUM: Object to the form.

1 A Again, RASTA is [REDACTED].

2 I do not know what these are pointing to, or even
3 what product these links are referring to.

4 I do not -- I cannot tell you
5 anything about these links.

6 Q Okay. If you look down at Links 92 and
7 93.

8 A Yes.

9 Q They refer to something called AWbid or
10 AW bid.

11 Are you familiar with AWbid?

12 A I am not, no.

13 Q So you don't know if -- you don't know if
14 dashboards related to AW bid exist?

15 A I don't -- I do not recall what AWbid
16 refers to.

17 Q So you didn't do any investigation as to
18 whether there were dashboards related to AWbid at
19 Google?

20 MR. MCCALLUM: Object to the form. And
21 object. It's beyond the scope.

22 A No, I did not.

23 Q If you look at starting with 23 through
24 28. These are all dashboards that reference the
25 phrase "Jedi," J-E-D-I?

1 A Uh-huh.

2 Q Are you familiar with Jedi?

3 A Generally speaking, I have heard of it. I
4 cannot tell you specifics about it.

5 Q What's your general understanding of what
6 Jedi is?

7 MR. MCCALLUM: Object. That's beyond the
8 scope.

9 A [REDACTED]
10 [REDACTED].

11 Q And do you know what it did?

12 A I cannot tell you specifics.

13 Q Are you aware if there are any dashboards
14 at Google related to Jedi?

15 A I cannot tell you.

16 Q Did you do any investigation to determine
17 whether there were dashboards at Google related to
18 Jedi?

19 MR. MCCALLUM: Object to the form. And
20 object. That's beyond the scope.

21 A Again, there's thousands of dashboards. I
22 cannot tell you if one still exists or their
23 maintained, anything about dashboards related to any
24 given product.

25 Q I'm saying: You didn't investigate

Page 72

1 specifically whether there were current dashboards
2 at Google related to Jedi?

3 MR. MCCALLUM: Same objection.

4 A I did not, no.

5 Q Entries Number 17 through 22. They all
6 reference the phrase " [REDACTED] ." Are you familiar with
7 [REDACTED] ?

8 A Only in the context of Star Wars.

9 Q Do you know if there are any dashboards at
10 Google related to [REDACTED] ?

11 A Again, I cannot -- there's thousands of
12 products, thousands of teams, you know, thousands of
13 dashboards that are created.

14 I cannot tell you if a dashboard ever
15 existed, if it was maintained or -- you know, or who
16 likely would be the person to talk to for any given,
17 you know, product that you mentioned.

18 Q Understood. And you didn't undertake any
19 investigation specifically related to [REDACTED]
20 dashboards --

21 A No.

22 Q -- in preparation for today's deposition?

23 MR. MCCALLUM: Object to the scope.

24 Object. That's beyond the scope. And object
25 to the form.

1 A No, I have not.

2 Q Is it -- is it fair to say that for every
3 link in -- in Exhibit 7 you did not investigate
4 whether there was -- there was a specific dashboard
5 related to -- to any of these topics or names?

6 MR. MCCALLUM: This is the document that
7 you created, Counsel?

8 MR. MCBRIDE: That's correct.

9 MR. MCCALLUM: Okay. Objection. Scope
10 and form.

11 A I did not investigate any of these hundred
12 or so go links.

13 Q Well, my question is not -- not about the
14 links themselves, but about -- about the various
15 products or programs or conducts, if you will,
16 identified in each of these links.

17 And by that I mean, for example, UPR,
18 RPO, DRS, et cetera.

19 MR. MCCALLUM: Objection. That's beyond
20 the scope. And object to the form.

21 A I did not investigate into any of these.

22 Q All right. You should have been handed --

23 MR. MCBRIDE: I think, Counsel, you do
24 have this.

25 (Whereupon, GOO-AT- MDL-002307662, State's

Page 74

1 Exhibit 8 was marked for Identification.)

2 Q Let me start over. You should have what's
3 been marked as State's Exhibit 8. This is a
4 multipage document bearing the Bates Number GOO-AT-
5 MDL-002307662.

6 A Can you say that one more time.

7 Q Sure. The entire string or just the
8 numbers?

A The entire string, please.

10 Q Yes. GOOG-AT-MDL-002307662.

11 A Thank you.

12 Q Through 002307666. Do you see that?

13 A I do.

14 Q Have you ever been seen this document
15 before?

16 A I have not.

17 | Q Are you familiar with [REDACTED]?

18 A I am not.

19 Q If you turn to the second to last page,
20 the one ending in 7665. [REDACTED]

21 | Page

22 Do you see that?

23 A I do.

24 | Page

25 [REDACTED]

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1 Are you familiar with [REDACTED]

2 [REDACTED]?

3 MR. MCCALLUM: Object. That's beyond the
4 scope.

5 A No, I am not.

6 Q Do you know what [REDACTED] stands for?

7 A I do not.

8 Q [REDACTED]

9 [REDACTED]
10 [REDACTED]."

11 Do you know what that's referring to?

12 A No, I don't.

13 Q If you go a little farther down it says
14 [REDACTED].

15 Are you familiar with that dashboard?

16 A No, I am not.

17 Q Do you know who would be?

18 MR. MCCALLUM: Object to the form.

19 A No I do not. Also, I cannot confirm or
20 deny whether that hyperlink actually goes into a
21 dashboard.

22 Q What would you need to do to confirm that?

23 A I would have to know what the link is.

24 Then I'd go to that link.

25 (Whereupon, GOOG-DOJ-14729810 through

Page 76

1 14729817, State's Exhibit 9 was marked for
2 Identification.)

3 Q All right. You should have in front you
4 what's been marked as State's Exhibit 9. It's a
5 multipage document bearing the Bates range
6 GOOG-DOJ-14729810 through 14729817.

7 Do you have at that document?

8 A I do.

9 Q Have you ever seen this before?

10 A I have not.

11 Q This appears to be an email from [REDACTED]
12 [REDACTED].

13 Do you see that?

14 A I do.

15 Q And do you know who that is?

16 A I believe he's an PM on our team, although
17 I cannot be sure.

18 Q The subject is [REDACTED],
19 correct?

20 A Correct.

21 Q If you go down to the bottom of the page,
22 there is a graphic of a table.

23 Do you see that?

24 A I do.

25 Q Is -- have you ever -- ever seen a

Page 77

1 dashboard or -- or a table that looks like this?

2 A What do you mean by "looks like this"?

3 Q [REDACTED]

4 [REDACTED]

5 A No. I don't think so, no.

6 (Whereupon, GOOG-DOJ-14729819, State's
7 Exhibit 10 was marked for Identification.)

8 Q You should have in front of you what has
9 been marked State's Exhibit 10.

10 This is a single page with the Bates
11 Number GOOG-DOJ-14729819.

12 Do you see that?

13 A I do, yup.

14 Q [REDACTED]

15 [REDACTED]

16 [REDACTED].

17 Do you see that?

18 A I do.

19 Q Have you ever seen this dashboard before?

20 A I have not.

21 Q You see that there are what appear to be

22 [REDACTED]?

23 A I do.

24 Q And in -- in the dashboards -- and I'm not
25 talking about this document or this dashboard, but

1 in the dashboards you looked at, at Google, have
2 there been ways to select filters or options for
3 particular metrics or fields?

4 A Generally speaking at Google, when you
5 create a dashboard, yes, [REDACTED]
6 [REDACTED].

7 Q Have you ever heard of a dashboard called
8 at [REDACTED]?

9 A No, I have not.

10 Q How about a dashboard, [REDACTED]?

11 A No, I have not.

12 Q Have you ever heard of any dashboards that
13 use the term [REDACTED] used at Google?

14 A No.

15 Q Do you know what [REDACTED] might stand for?

16 A No, I do not.

17 MR. MCBRIDE: Why don't we take a
18 ten-minute break for me to collect my thoughts,
19 and hope to be able to wrap up soon.

20 MR. MCCALLUM: Sounds good.

21 THE VIDEOGRAPHER: The time now is

22 4:02 p.m. and we are off the record.

23 (Whereupon, a short recess was taken.)

24 THE VIDEOGRAPHER: The time right now

25 4:18 p.m. and we're back on record.

1 Q I apologize if I already asked this --

2 A Uh-huh.

3 Q -- but do you have a sense of how many
4 teams there are within the Ad Manager group?

5 A Teams -- varies. It's, you know, there
6 are teams, subteams, and, you know, it goes down so,
7 you know -- so I mean hundreds, maybe.

8 I mean, a team could consist of a
9 single person.

10 Q And is there a highest reporting level
11 in -- in the Ad Manager group in terms of teams?

12 A I mean, the Ad Manager itself is a team.

13 Q And then if we go one step down from
14 there, how many -- how many teams or buckets are
15 there?

16 A Like underneath just the general
17 Ad Manager team? I mean, you could -- [REDACTED]
18 [REDACTED]. It's hard to tell. There
19 could be some overlap in people.

20 Q Can you -- could you give me the names of
21 those half dozen or dozen teams.

22 A I -- maybe not all of them, but for
23 example, the reporting team which, you know, I'm on
24 as being one of those. There's a serving team,
25 which again, all of these have many subteams.

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1 There's product managers, UX researchers, front end
2 team. And I'm sure there some that I'm missing.

3 Q What about a sales team?

4 A Yeah. There's definitely a sales team,
5 yup.

6 Q How about a finance team?

7 A I believe so. Yeah, I believe there as a
8 finance team of -- you know, the -- their --
9 their -- direct responsibilities. I don't know if
10 they are only Ad Manager, or maybe perhaps they're
11 more broader sale side or ads or something like
12 that. I -- I can't speak specifically to that.

13 Q So if I wanted to talk to someone on that
14 team about what dashboard -- that team might have
15 created --

16 A On -- on which team? Sorry.

17 Q The finance team.

18 A Sure, yup.

19 Q Do you know who I would talk to?

20 A I -- I mean I -- I -- the name [REDACTED],
21 I believe he was on that finance team.

22 Q And he's someone you spoke to?

23 A Yes.

24 Q And as a result of that conversation, are
25 there particular dashboards that you're aware of

1 that finance team uses?

2 A I believe I gave some of those things
3 before. There's the -- I can't recall the exact
4 names. There was display. I can't remember the
5 exact names. I believe I gave them earlier.

6 Q How about for the sales team? Is there an
7 individual there that -- that you would go to, to
8 ask about dashboards that they've created?

9 A No. I -- I cannot give you any names.

10 Q How about the -- the front end team?

11 A Are there dashboards the front end team
12 has built?

13 Q Yeah. Who would I -- who would I ask?

14 A Within the reporting front end I -- I
15 believe [REDACTED] was one. [REDACTED].

16 Q How about for the PM team?

17 A I can't tell you any specific person on
18 the PM team that's built a dashboard.

19 Q What if there's -- if there someone you'd
20 go to ask whether there were dashboard that they had
21 build, is there such a person?

22 A A dashboard that they build?

23 Q Correct.

24 A I can't tell you any specific person
25 that's built a dashboard on the PM team.

1 Q But if -- if you wanted to confirm whether
2 or not they had, who do you think would be the most
3 knowledgeable?

4 A I can't give you a single name of a
5 person, because PMs, generally speaking -- there's
6 [REDACTED] per product, per subteams and stuff like that
7 and so they would maybe each individually have or
8 use dashboards for that specific product that they
9 are working on, but I can't tell you one person that
10 could speak for the PM team in general about
11 dashboards for the PM team in general.

12 Q How about is there anyone that you can
13 think of on the PM team that would be able to answer
14 questions about dashboards?

15 A I -- no name comes to mind specifically.
16 You know, generally when -- you know, dashboards are
17 things that people with data access skills do, and
18 it's a generally -- you know, whether or not an
19 engineer -- I'm sorry -- a product manager is
20 building a dashboard is -- I -- I generally don't
21 talk to them about that and don't see -- if they do
22 built dashboards, I don't see them.

23 Q Do you know the names of people on the PM
24 team?

25 A Yeah, I'm -- few -- I'm aware of several.

1 Q Can you give me one name.

2 A [REDACTED].

3 Q [REDACTED] who?

4 A [REDACTED].

5 Q [REDACTED]. How about for the serving team? Is
6 there -- who -- who would you talk to if you wanted
7 to know if the serving team created dashboards?

8 A Again, it varies based on products. I
9 mean, there's many subteams within the serving team.

10 You know, it just depends on what --
11 what if -- you know, what kind of dashboard I would
12 be looking for. I think I gave the name [REDACTED]
13 before.

14 MR. MCBRIDE: Well, I don't think I have
15 any more questions for [REDACTED]. I
16 appreciate your time.

17 I do and I don't want to make a speech on
18 the record. I -- I don't think that this
19 witness really fulfilled the special master's
20 order to provide someone personal knowledgeable
21 about the dashboards for display advertising.

22 Obviously you may disagree, and I'm sure
23 we can -- we can take that offline, but to --
24 to that extent we'll hold this deposition open
25 for -- for a more suitable witness. But with

1 that I pass the witness.

2 MR. MCCALLUM: So I guess obviously I
3 disagree with those particular comments. The
4 witness has testified to his experience as to
5 dashboards, and we think this was a properly
6 prepared witness.

7 And now I think he gave testimony that
8 there are thousands, if not more dashboards
9 within Google, so it's impossible to know what
10 they all are.

11 You asked him a series of very specific
12 questions about individual dashboards. I think
13 he's given proper answers to those questions.

14 But with that, I'm -- and obviously we'll
15 take that offline and have further discussions
16 around it.

17 [REDACTED], just a couple of quick
18 questions.

19 EXAMINATION

20 BY MR. MCCAULLUM:

21 Q Could you just tell me how dashboards are
22 used within Google.

23 A Yeah. Dashboards are generally used as a
24 way of representing an underlying data source. It's
25 generally some slice or, you know, some subset of

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1 data that it can -- you know, that you're interested
2 in, and you'd like to see and visualize quickly.

3 Q And who at Google can create a dashboard?

4 A I believe almost any employee at Google
5 can create a dashboard if they have access to the
6 underlying data.

7 Q Do you know how many dashboards there are
8 at Google?

9 A It could be tens of thousands, hundreds,
10 maybe millions of dashboards. It's -- you know,
11 countless.

12 Q Is there any person at Google who would
13 have knowledge of all of those thousands, tens of
14 thousands, millions of dashboard?

15 A Absolutely not, no.

16 Q Are all of those dashboards actively
17 maintained?

18 A No. Definitely not.

19 Q When you say "definitely not," what makes
20 you say that?

21 A Because I'm aware of numerous dashboards
22 that are no longer maintained.

23 Q Okay. In your experience, do the
24 dashboards typically maintain information separate
25 and apart from the data sources that feed into them?

1 A No. Generally the data sources are more
2 reliable than dashboards themselves.

3 Q Okay. And you mentioned a couple of
4 different teams such as the finance team?

5 A Uh-huh.

6 Q Do you have an understanding of how, if at
7 all, the finance team uses dashboards?

8 A Yeah. I believe they create dashboards
9 for whatever specific product or, you know, the
10 thing they're currently working on.

11 They view it as a -- as a way to more
12 quickly get information that is relevant to their
13 job. So they'll create a dashboard that is specific
14 to whatever they're currently working on.

15 If other people find that dashboard
16 useful they might share it with other people, but
17 generally it's a per person would create their own
18 dashboard.

19 And then from my understanding, these
20 are not things that are maintained for long periods
21 of time. You know, and they're -- they're ad hoc
22 and as needed.

23 Q So is there any set of key-approved
24 centrally stored Google dashboards that pertain to
25 the finance team?

1 A Not that I'm aware of, no.

2 Q I will ask to you look at State's
3 Exhibit 7 which is the document that counsel created
4 with a list of 97 entries.

5 Do you have that in front of you?

6 A I do, yes.

7 Q And on the left-hand side about halfway
8 way down you see 17 through 22.

9 And counsel for the States asked you
10 about entries relating to [REDACTED].

11 Do you recall that?

12 A I do, yes.

13 Q Okay. Do you have any reason to believe
14 that any of the entries there item 17 through 22 are
15 actively maintained dashboards?

16 A No.

17 Q Do you have any reason to believe that the
18 items there at 17 to 22 are key or important --
19 important dashboards?

20 A No.

21 Q Are you able to tell from the links at 17
22 to 22 whether these are, in fact, dashboards at all?

23 A No, I cannot.

24 Q Are you able to tell from Item 17 through
25 22, what, if any, inputs go into the data stored at

1 those links?

2 A No; I cannot tell.

3 Q Okay. As a general matter, how would you
4 go about finding out information related to any
5 specific set of dashboards?

6 A I would have to go and talk to the person
7 that created them.

8 Q Okay. Moving on to Items 23 through 28.
9 You were asked a series of questions by counsel to
10 States about Jedi.

11 Do you recall that testimony?

12 A I do.

13 Q And the same questions really. Do you
14 have any reason to believe that any of those items
15 listed at 23 through 28 are actively maintained
16 dashboards?

17 A No.

18 Q Do you have any reason to believe that
19 those items at 23 through 28 are accurate sources of
20 data or information?

21 A No.

22 Q Do you have any reason to believe that
23 those are, in fact, dashboards?

24 A No, I do not.

25 Q And even though the name "dashboard"

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1 appears in the go link listed there, why is it that
2 you have no reason to believe it's a dashboard?

3 A Oftentimes a go link can maybe be
4 referring to the documentation about a dashboard.
5 It could be referring to really, any number of
6 things. And like I said before, that go links are
7 arbitrary.

8 You could create any go link and
9 point it to any, you know, data -- any -- any
10 other -- any URL you want. So just because
11 dashboard is in the name, that doesn't mean that it
12 actually go to a physical dashboard.

13 Q And if you wanted to find out more
14 information about those entries, 23 to 28, how would
15 you go about finding out that information?

16 A I would have to visit those go links
17 specifically, and then I'd open them up, and view
18 the source.

19 And then I would probably try to find
20 whoever created these links and things of that and
21 ask them for information -- more information about
22 it.

23 Q And with respect to Entry 76, you were
24 asked about header bidding.

25 Do you recall that?

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1 A I do.

2 Q Same questions. Would your answer be any
3 different with respect to Entry 76?

4 A No.

5 MR. MCBRIDE: Objection to form.

6 Q What about Items 81 and 82?

7 A No different, no.

8 MR. MCBRIDE: Same objection.

9 Q 83 through 85?

10 A Nope. No.

11 Q You've given testimony around a variety of
12 dashboards used by teams as Google. Can those
13 dashboards be accessed outside of the Google
14 ecosystem?

15 A No. They cannot. They rely on Google
16 infrastructure for viewing, and it cannot be just
17 put onto a laptop and taken offline.

18 Q And could you give me a little detail
19 about that. So is it possible to put a dashboard on
20 a laptop and make it available independently of the
21 Google network?

22 A No. You need to be connected to the
23 Google network; have an internet connection. These
24 are roughly -- you know, roughly speaking stored on
25 the Cloud. And they cannot be put onto a laptop and

1 disconnected from the Google internal
2 infrastructure.

3 Q Is that because the dashboards rely on
4 underlying data sources?

5 A It's a combination of relying on
6 underlying data sources, but also the infrastructure
7 that powers the dashboards and things like that.
8 Have to be a part of the Google infrastructure.

9 Q And when you say the "infrastructure that
10 powers the dashboards," what do you mean?

11 A So the -- the physical UIs, the -- you
12 know, the querying engines and things like that --
13 these are all, you know, things that are done within
14 the Google Cloud -- internal Cloud Google ecosystem,
15 and cannot be disconnected from them.

16 Q And the underlying data sources upon which
17 the dashboards sit -- could you give us a rough
18 indication of the size of those data sources, if you
19 can.

20 A The size of those data sources. I mean,
21 they could be -- I mean, it -- it varies. Some of
22 these are derived data sources from things like
23 logs. Logs themselves can be exabytes in size. I
24 mean, exabytes is 1,000 petabytes which is 1,000
25 perabytes which is 1,000 -- these are enormous

1 datasets.

2 There are derived datasets that are,
3 you know, from that. It may be more specific; they
4 would be faster to query, and those could be much
5 smaller in scale. You know, maybe gigabytes. Maybe
6 even smaller. Megabytes and such.

7 MR. MCCALLUM: Can I just take a quick
8 break and see if there's anything else and then
9 probably we can wrap this up.

10 MR. MCBRIDE: All right.

11 THE VIDEOGRAPHER: The time is now is
12 4:32 p.m. and we are off the record.

13 (Whereupon, a short recess was taken.)

14 THE VIDEOGRAPHER: The time right now is
15 4:41 p.m. and we're back on the record.

16 Q [REDACTED], if someone had access to the
17 data -- raw data underlying the dashboard, would
18 that person be able to create their own dashboards
19 to interpret the data?

20 A Yeah, absolutely. The -- you know, any
21 commonly used infrastructure that's open source
22 should be able to -- or any tooling should be able
23 to take this data and manipulate it. You know, take
24 a subset of data that you're interested in and
25 display it in a dashboard.

1 MR. MCCALLUM: That's all for now.

2 MR. MCBRIDE: Just very, very brief
3 follow-up.

4 EXAMINATION

5 BY MR. MCBRIDE:

6 Q With regards to the accessibility of these
7 dashboards, if you had your laptop and you were
8 VPN'd -- in this room you were VPN'd into Google's
9 network, could you access them?

10 A If I had my lap- -- my corporate laptop
11 and I was VPN'd in this room with internet
12 connection, and assuming all that sort of stuff, and
13 I had permissions to view the dashboard, then yes, I
14 would be able it access them.

15 Q Does Google in your experience ever set up
16 clean rooms to allow customers to come and view
17 dashboards or query data sources?

18 A Customers, as in like customers of Google?

19 Q Correct.

20 A I have never once heard of any Google ever
21 letting a customer view internal data sources.

22 Q You said some of these data sources can be
23 exabytes and then you -- is that correct?

24 A Yeah. Some of our logs, you know, are --
25 are quite large.

1 Q How many -- how many hard drives, like
2 consumer hards drive would it take me to fill up an
3 exabyte of data?

4 A I believe Amazon AWS -- Amazon Web
5 Services offers petabyte storage, which is I think
6 for 100 petabytes will take up an entire shipping
7 container full of hard drives.

8 And they use this so that -- because
9 it's simply faster to bring hard drives to your
10 physical location, put the stuff on the hard -- and
11 then drive it to wherever you want take it,
12 rather -- so -- so you can imagine an exabyte would
13 be ten shipping containers at least full of hard
14 drives.

15 Q Got it. That's all I have.

16 MR. MCCALLUM: Just one quick follow-up.

17 EXAMINATION

18 BY MR. MCCALLUM:

19 Q You mentioned permission-ing of the
20 underlying data?

21 A Yup.

22 Q Do you have permission to access all of
23 the underlying data at Google?

24 A I don't, no. No one -- no one person will
25 have permissions on all data at Google.

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1 There's -- they're very tightly
2 guarded by various names and by various permission
3 services.

4 MR. MCCALLUM: Thank you.

5 MR. MCBRIDE: Nothing further.

6 THE VIDEOGRAPHER: The time right now is
7 4:44 p.m. And we're off the record.

10

12

Signed and subscribed to
before me, this _____ day
of _____ 2024.

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Notary Public

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EXAMINATION BY _____ **PAGE** _____

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4 M R . M C B R I D E 5

5 MR. McCAULLUM 84

6 MR. MCBRIDE 93

7 MR. MCCALLUM 94

8

9

10 | P a g e

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14 through 1859621, 2 29

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16 through 1776868 , 3 31

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19 GOOG-AP-MDL-004017319

20 through 004017350 , 5 42

21 GOOG-AT-MDL-012699778

22 through 12699811, 6 46

23 document created by

24 Mr. McBride, 7 65

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1 GOOG-DOJ-14729810

2 through 14729817 , 9 76

3 GOOG-DOJ-14729819 , 10 77

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7 DESCRIPTION PAGE

8 NONE

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11 I N D E X O F R U L I N G S

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16 I N D E X O F I N S E R T I O N S

17 DESCRIPTION PAGE

18 NONE

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1 C E R T I F I C A T E

2 STATE OF NEW YORK)

:

3 COUNTY OF SUFFOLK

4

5 I, JOANNA MARTINEZ, a Notary Public within and
6 for the State of New York, do hereby certify:

7 THAT [REDACTED], the witness whose
8 deposition is hereinbefore set forth, was duly sworn
9 by me and that such deposition is a true record of
10 the testimony given by such witness.

11 I further certify that I am not related to any
12 of the parties to this action by blood or marriage;
13 and that I am in no way interested in the outcome of
14 this matter.

15 IN WITNESS WHEREOF, I have hereunto set my
16 hand this 13th of March 2024.

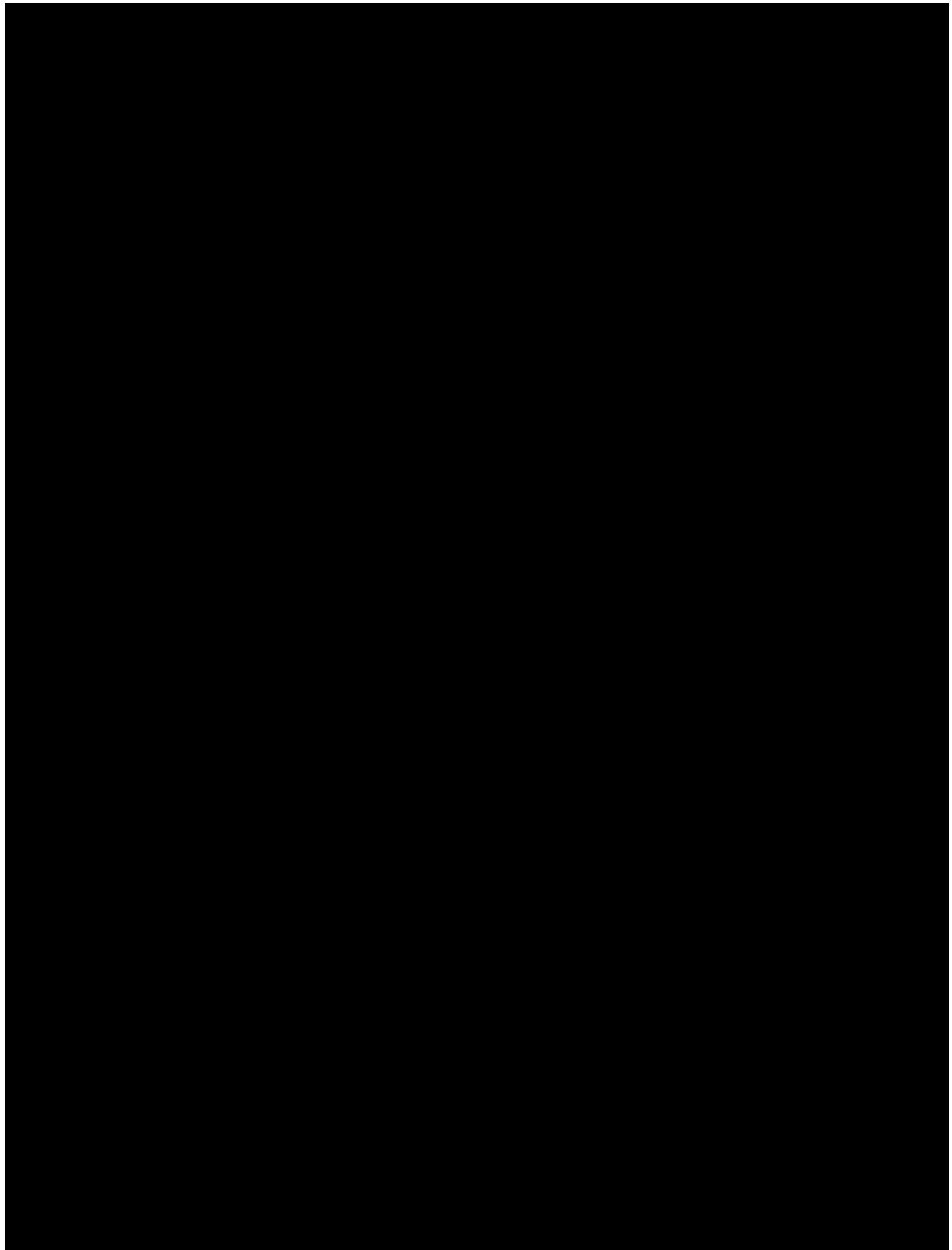
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20 JOANNA MARTINEZ
21
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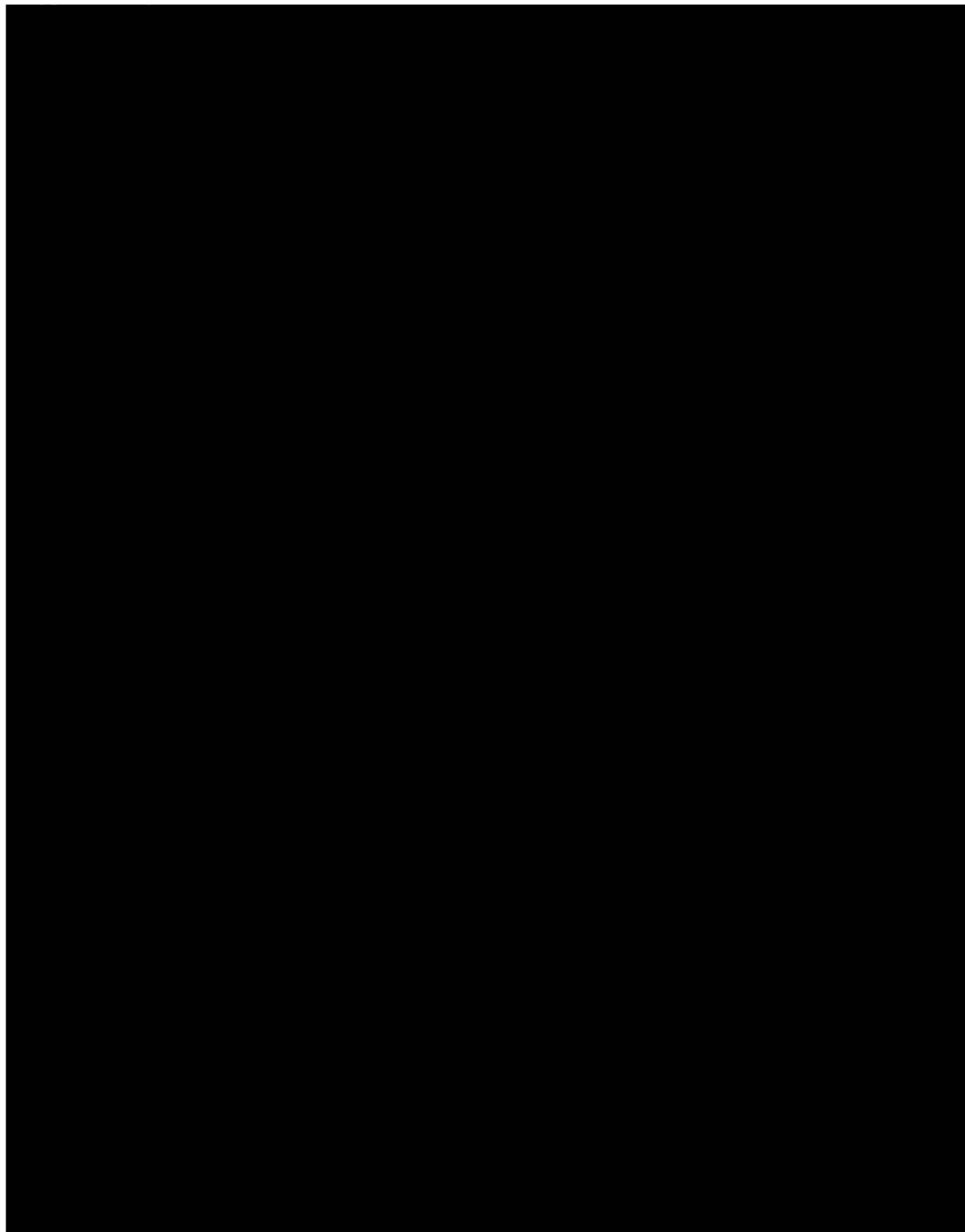
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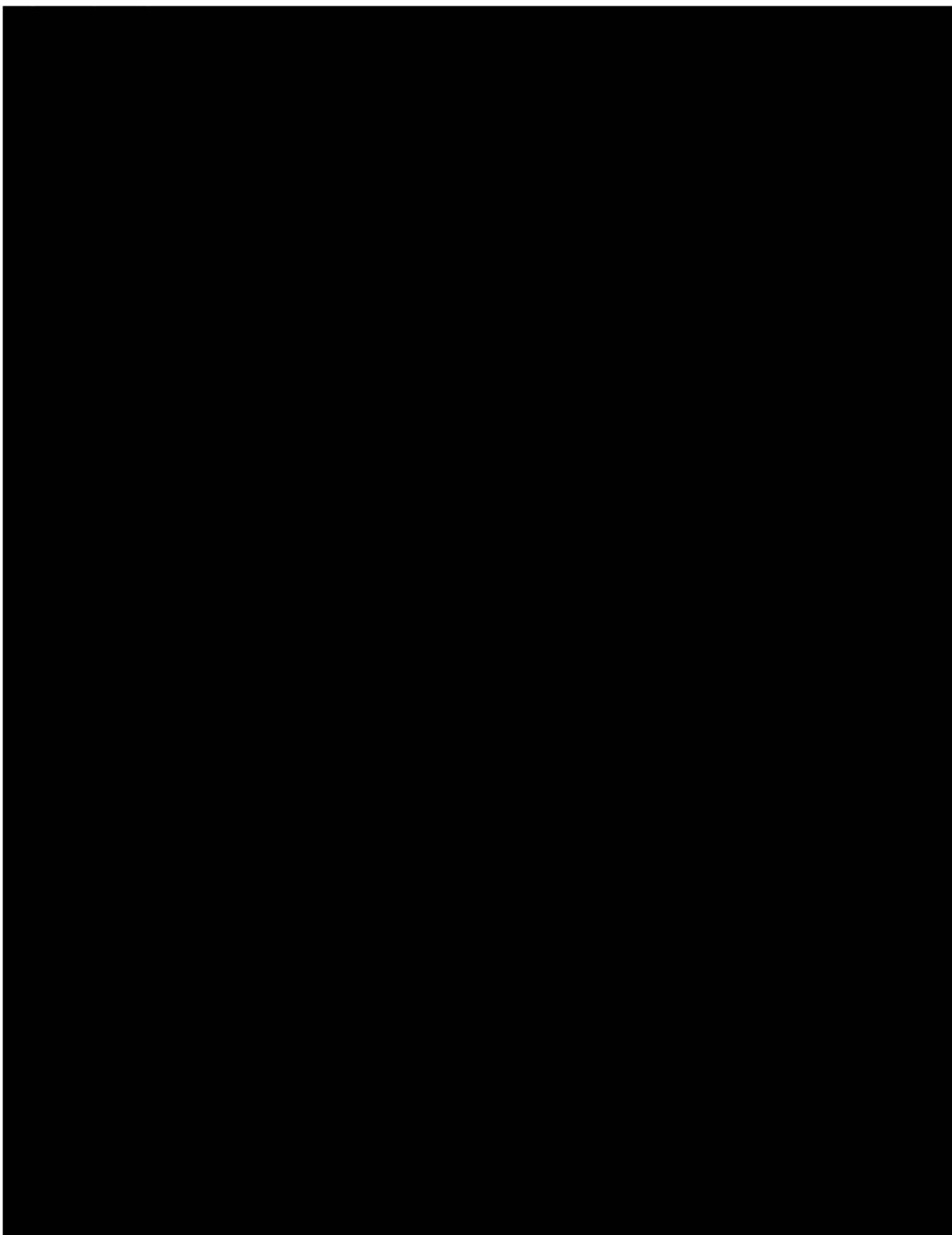
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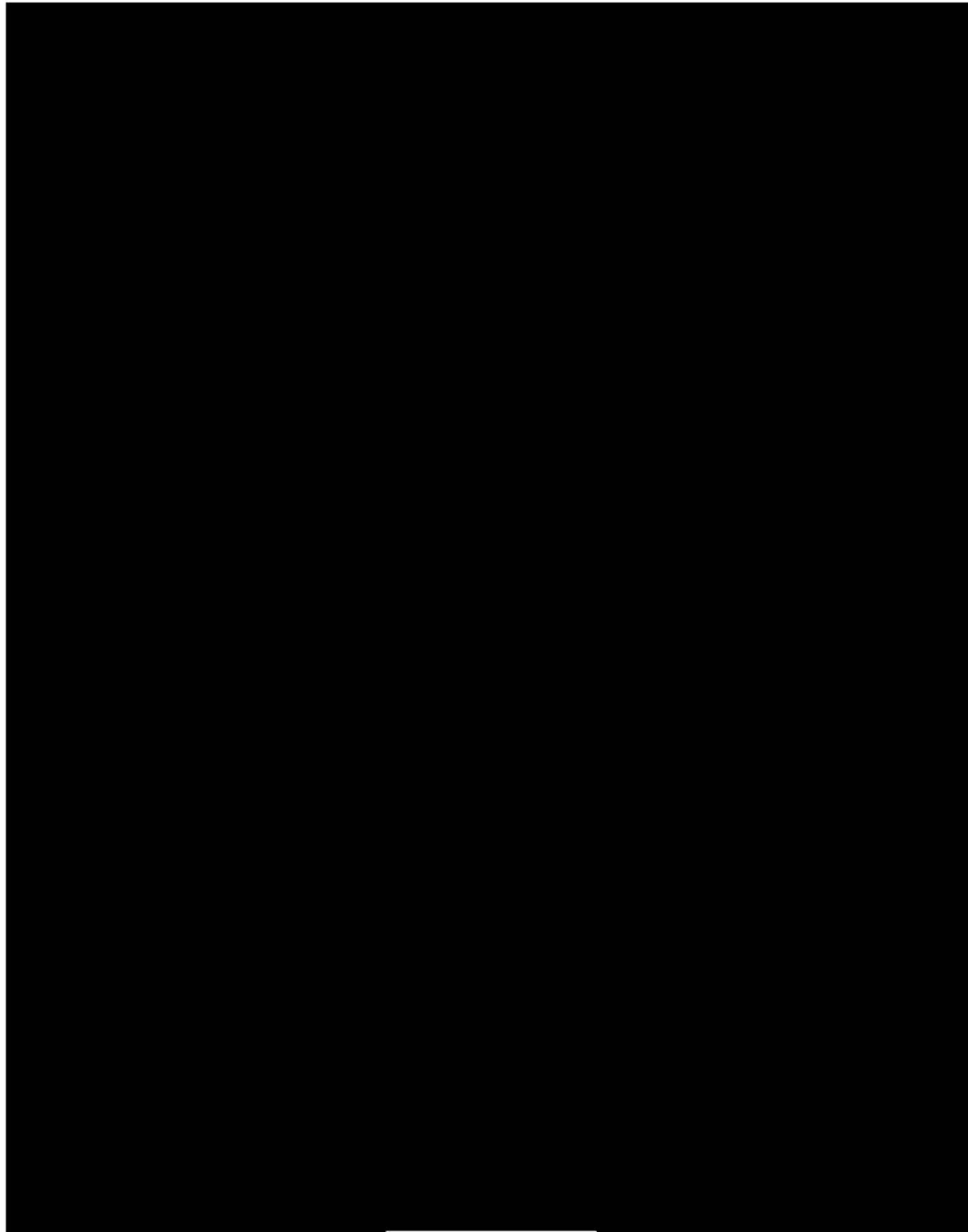
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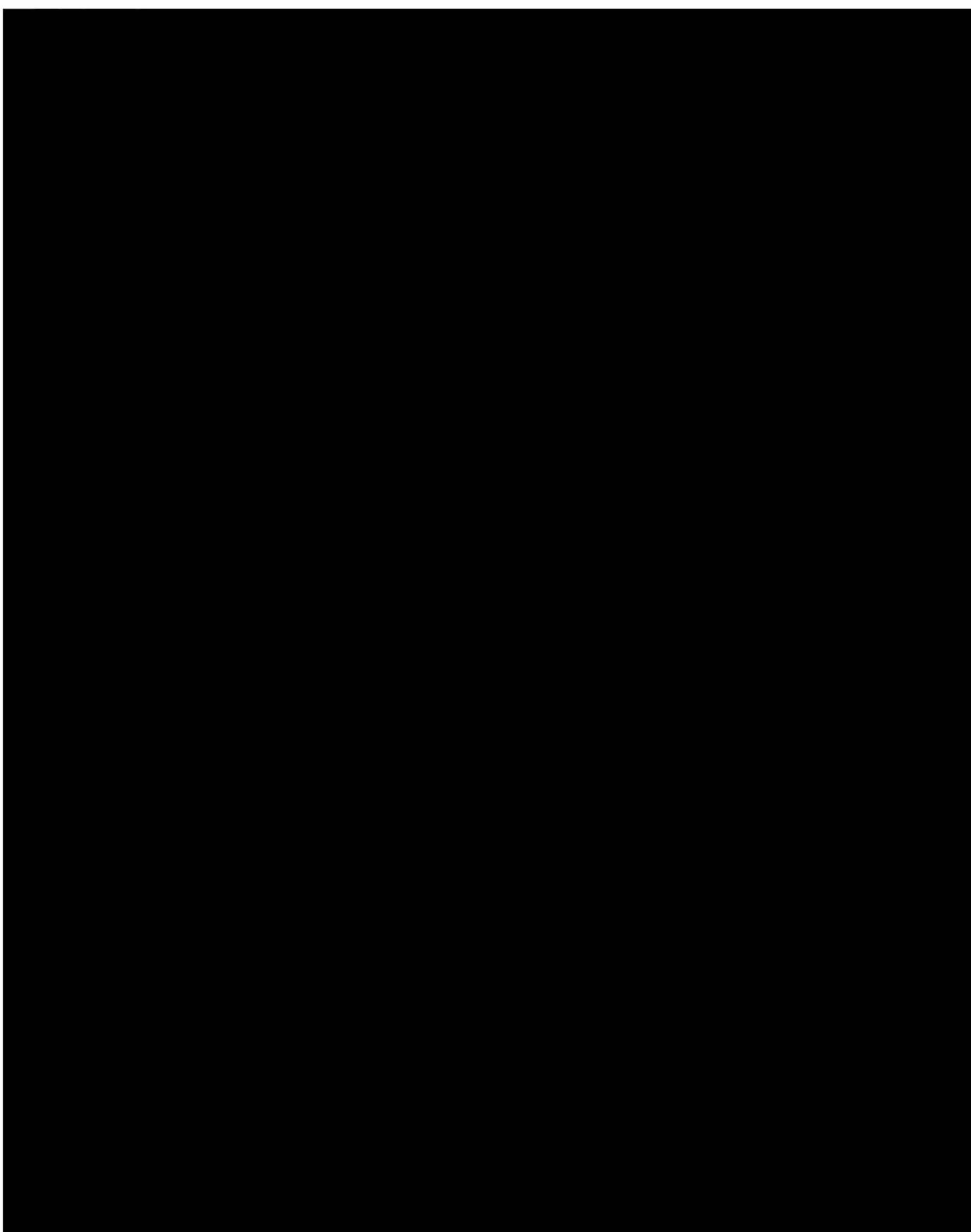
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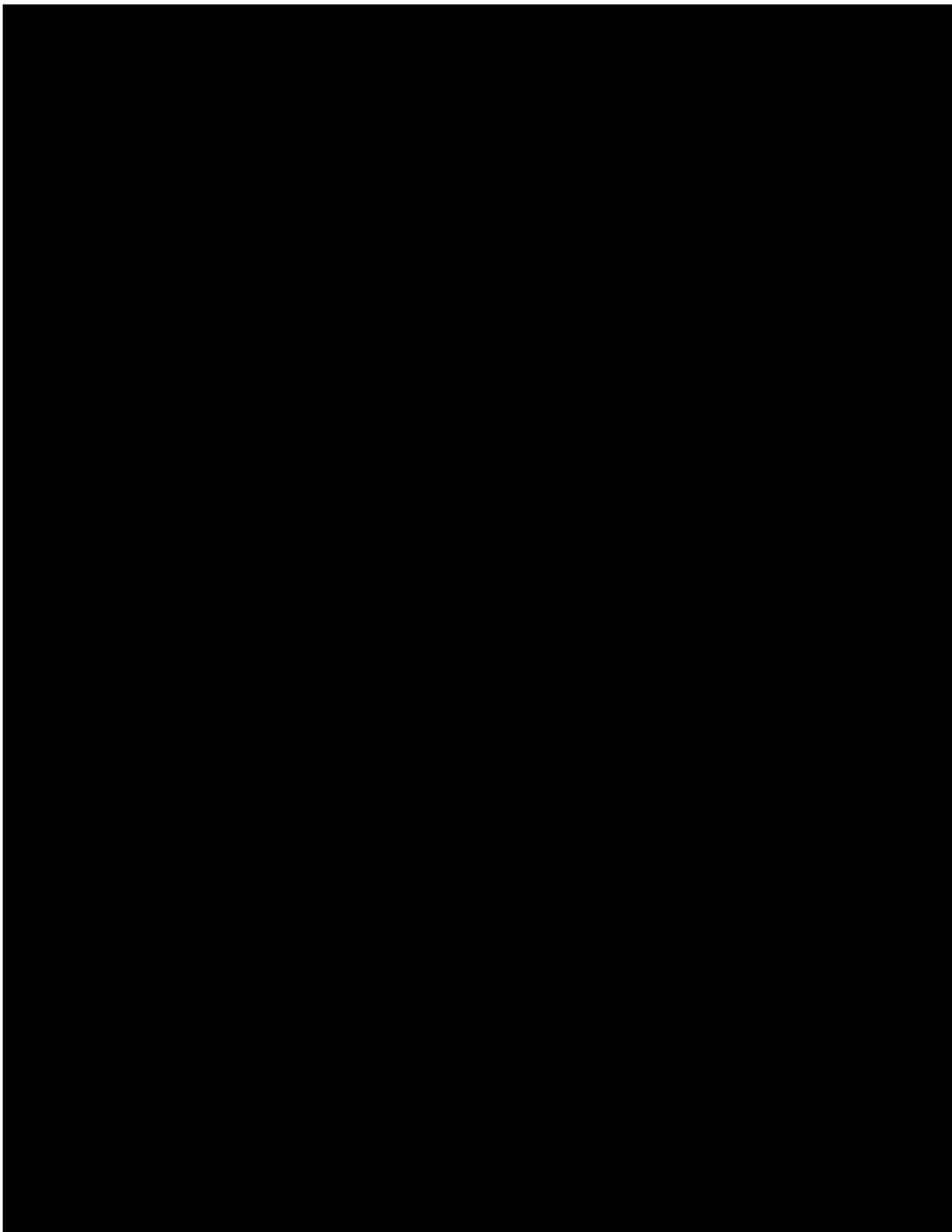
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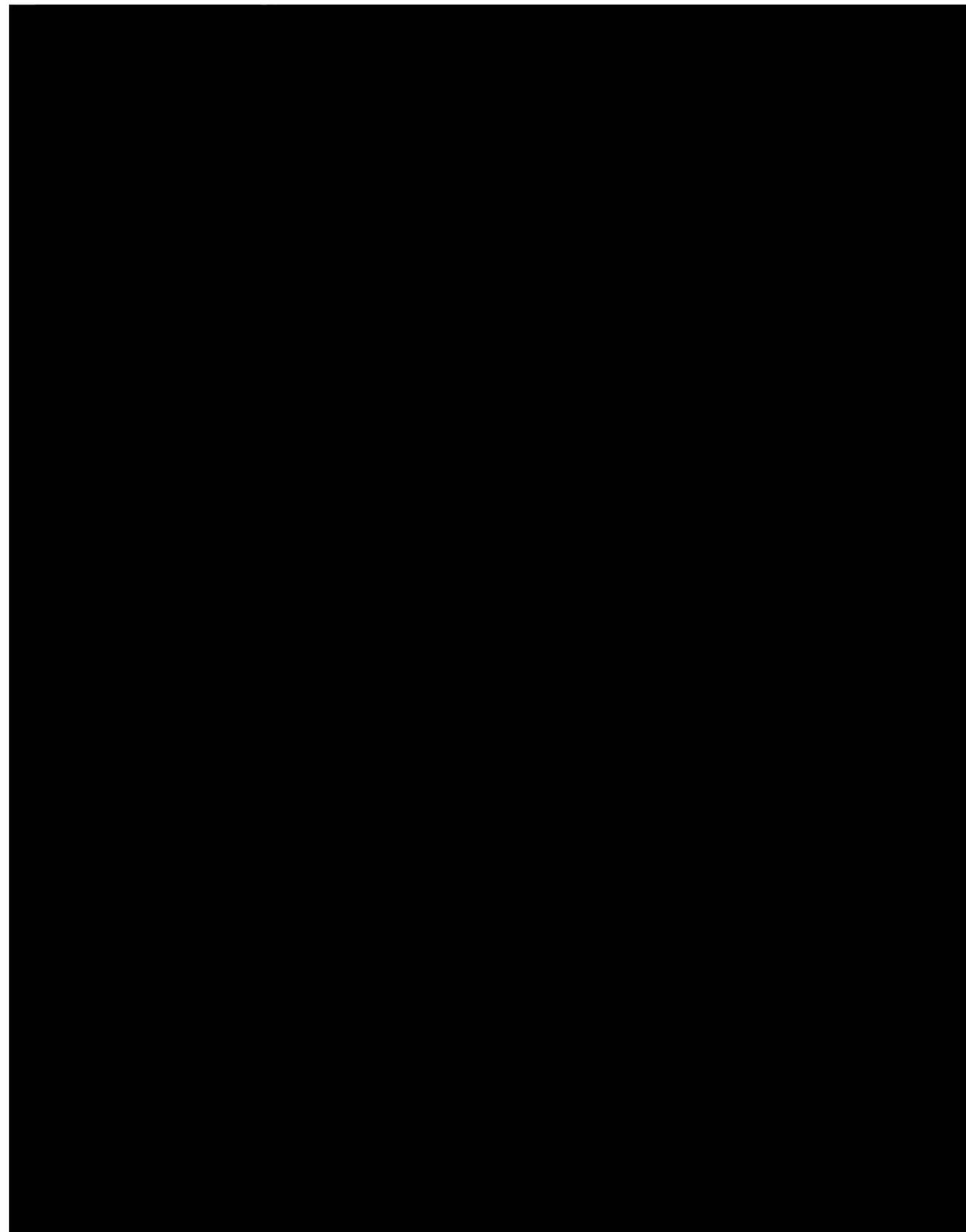
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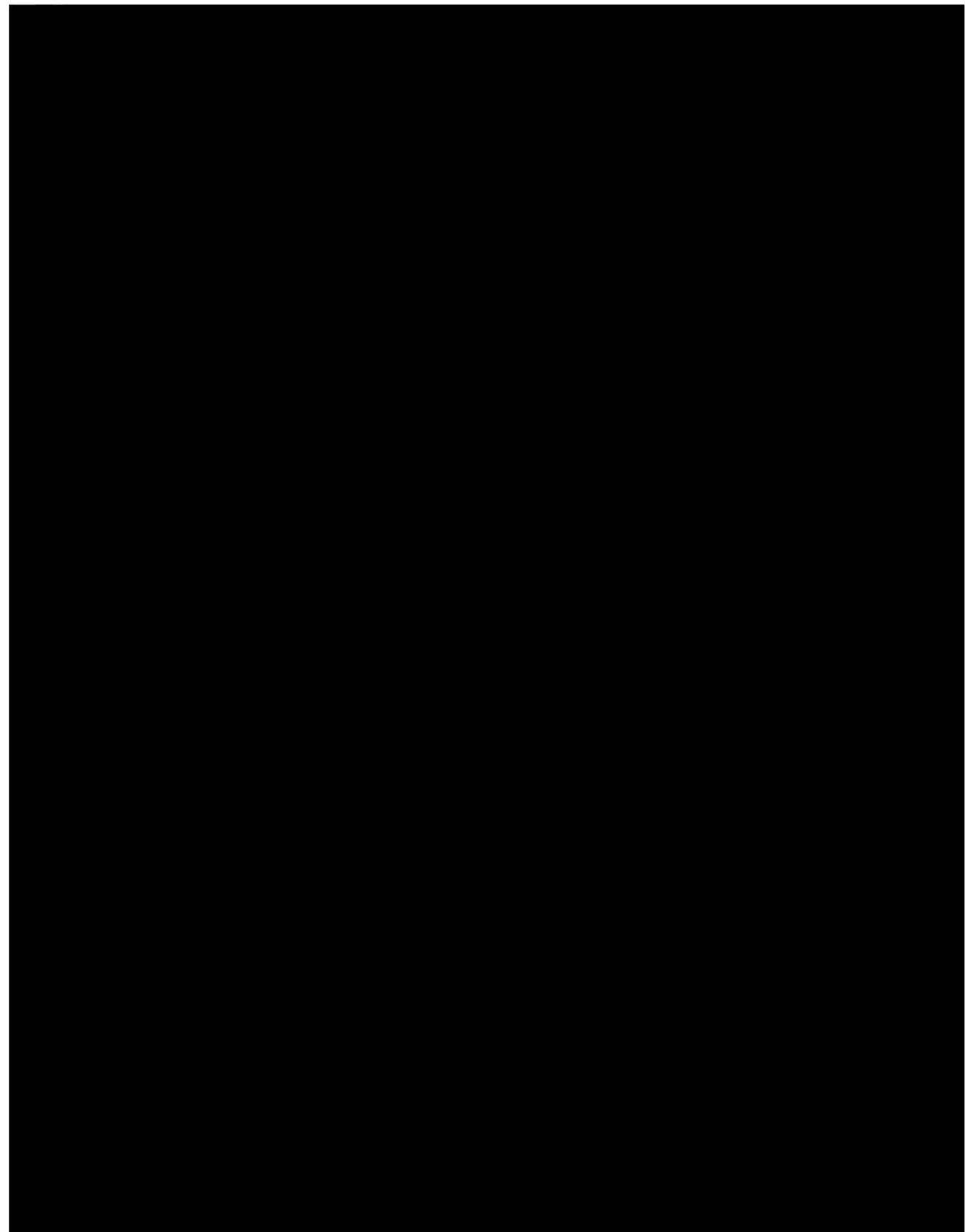
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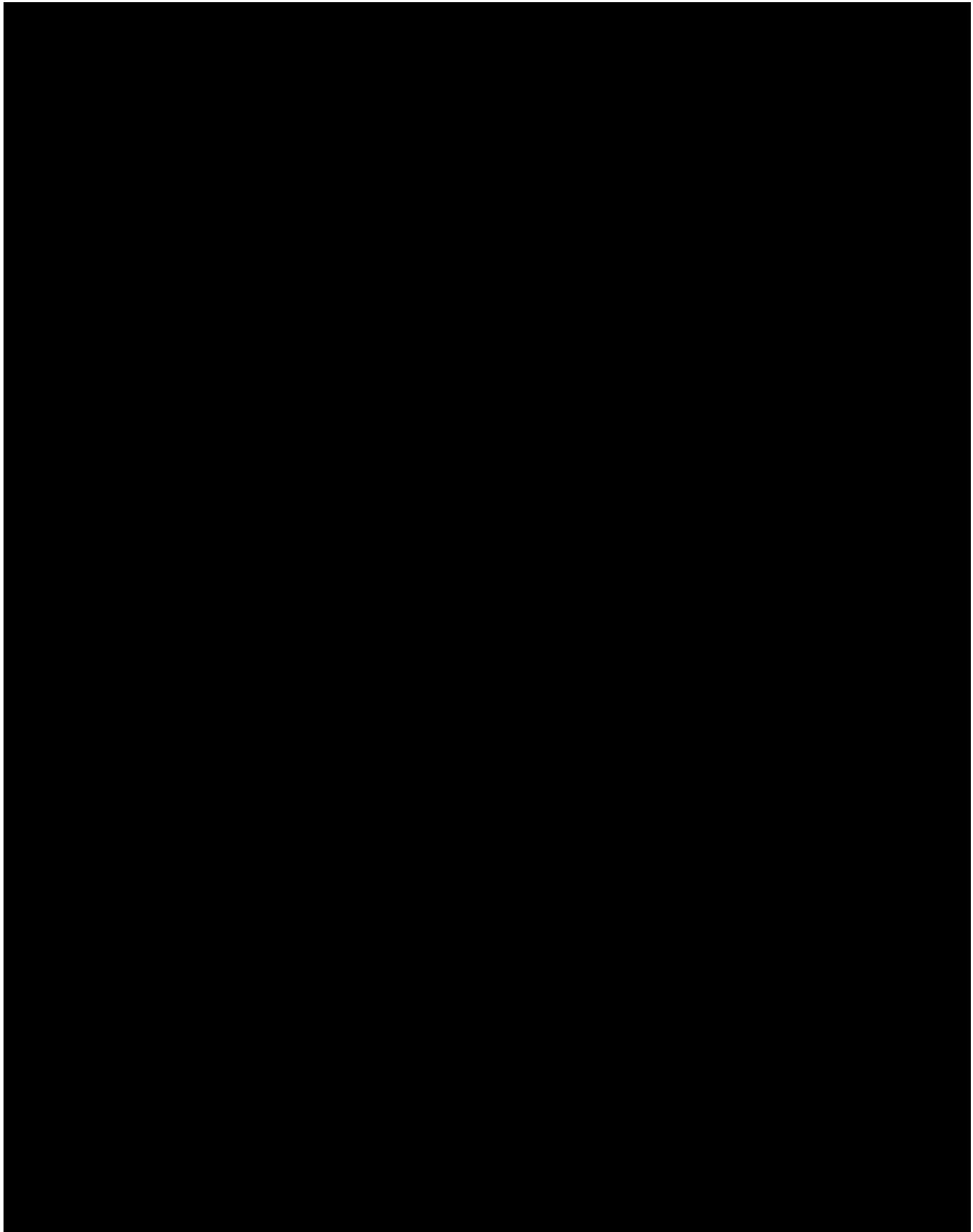
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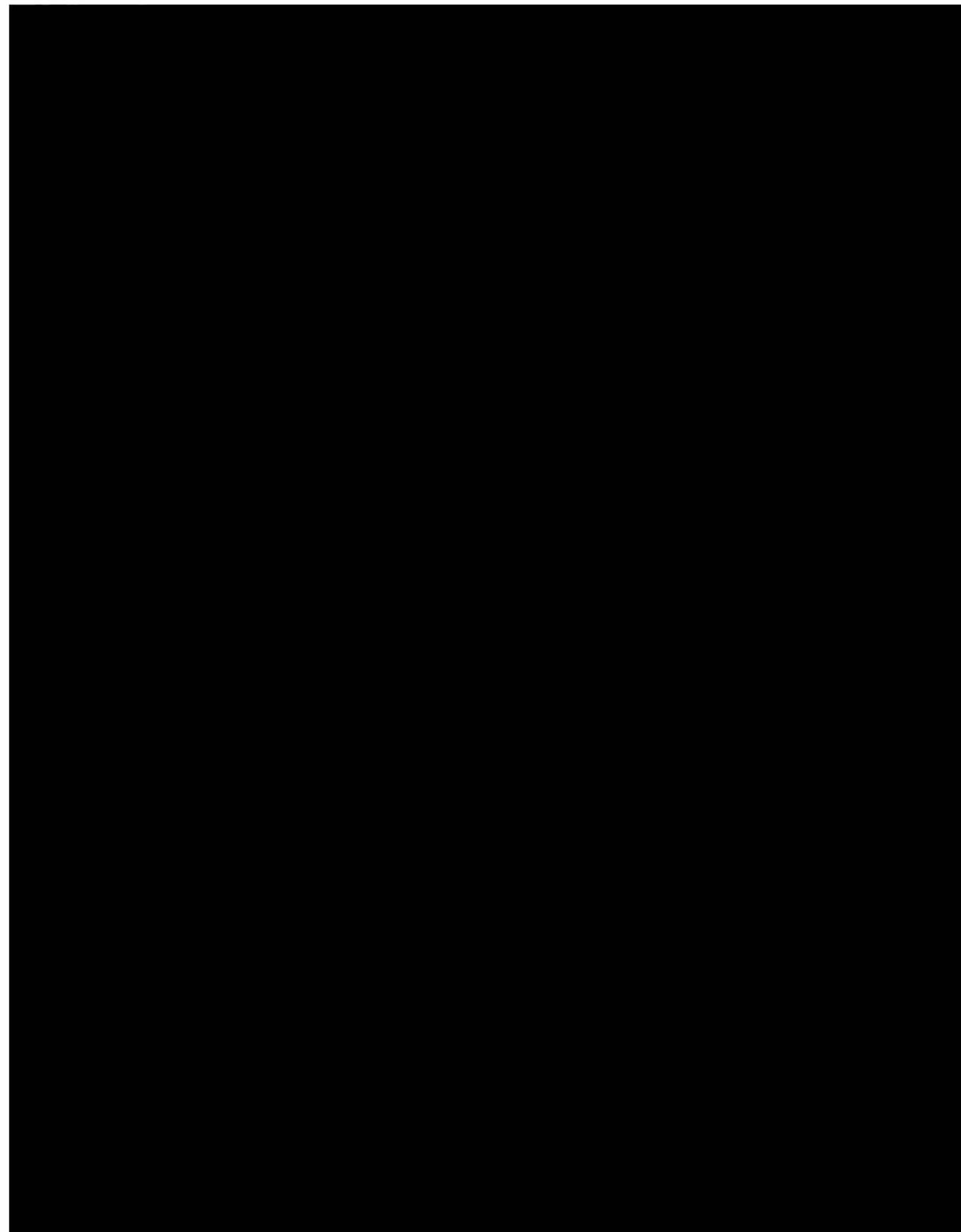
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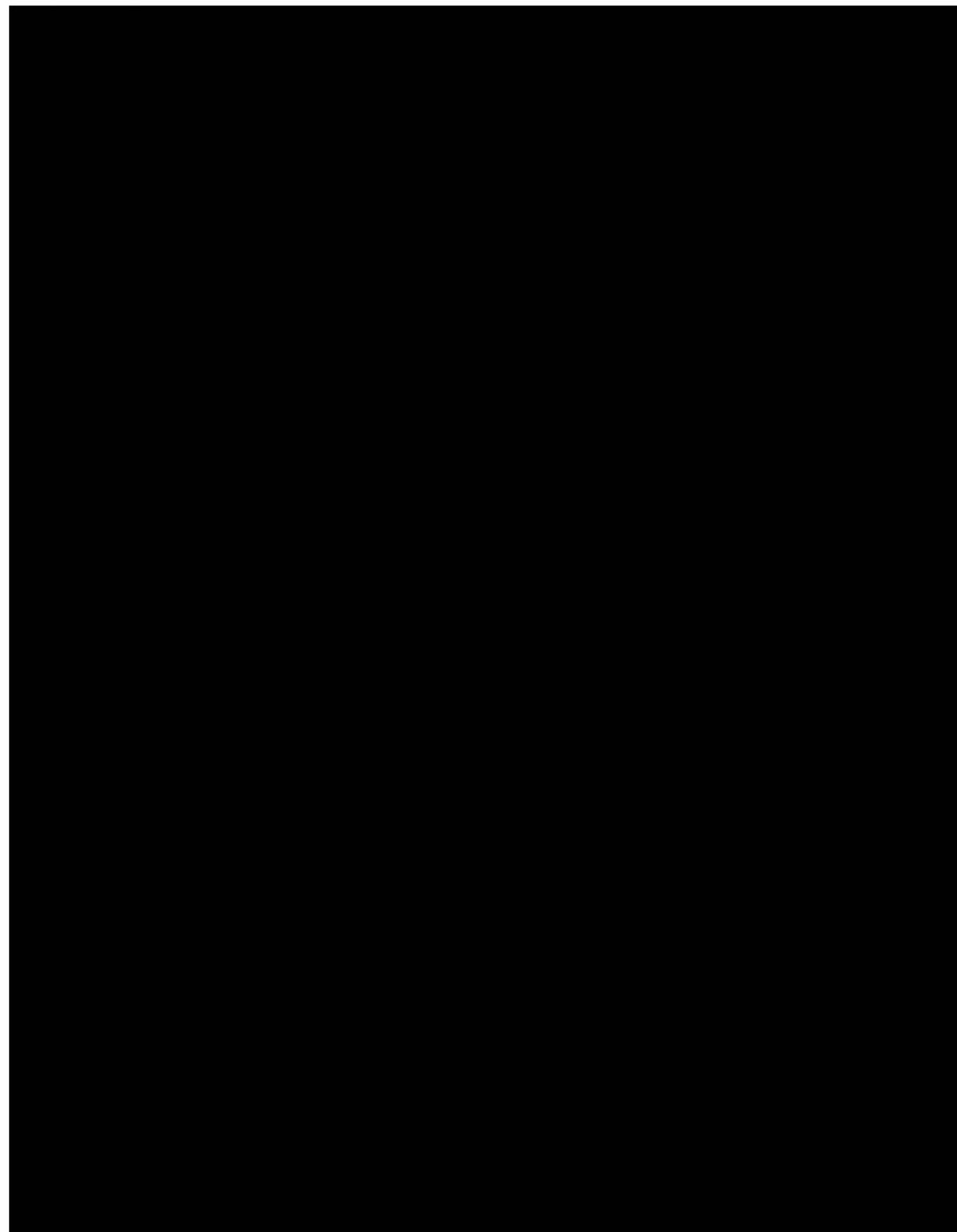


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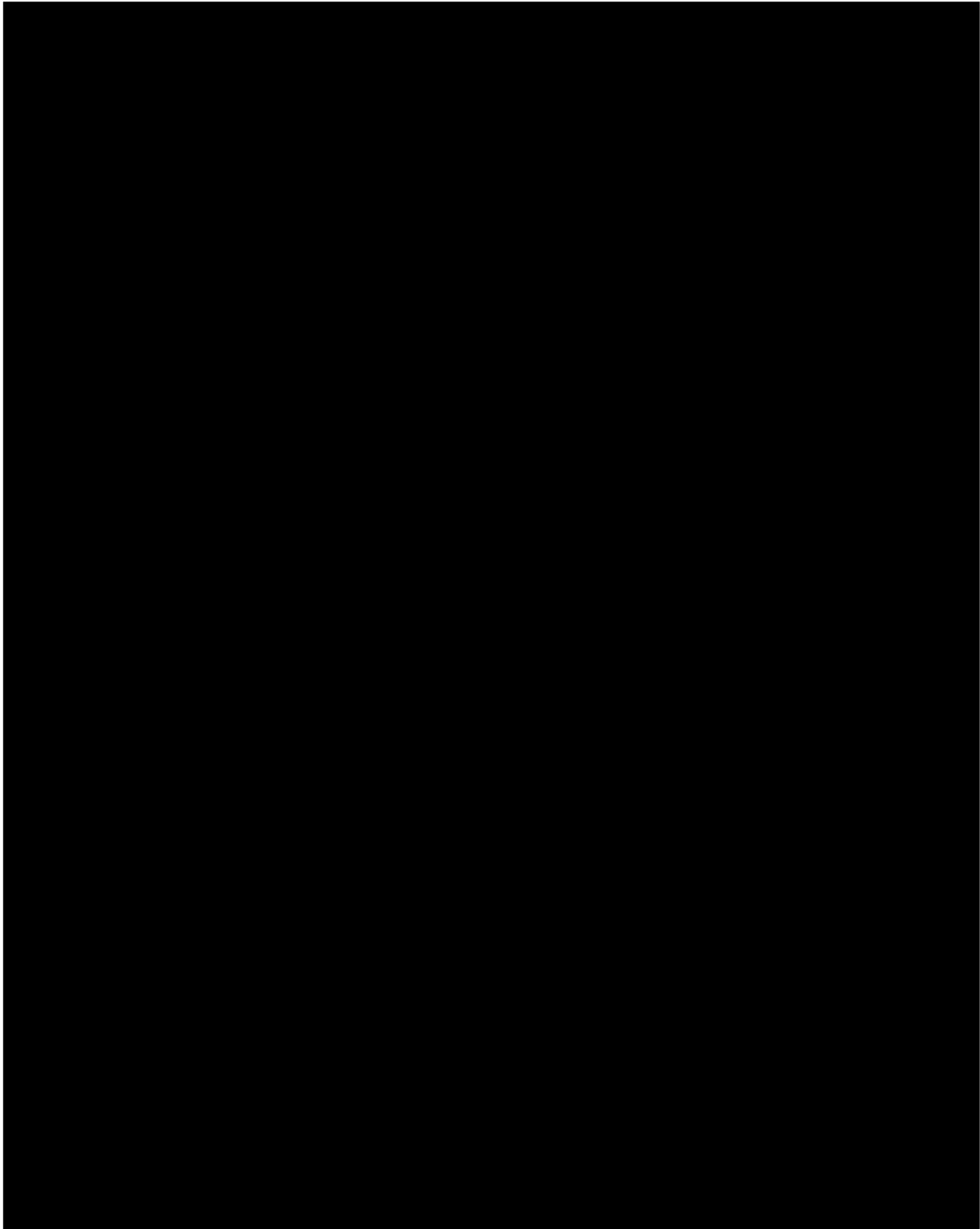
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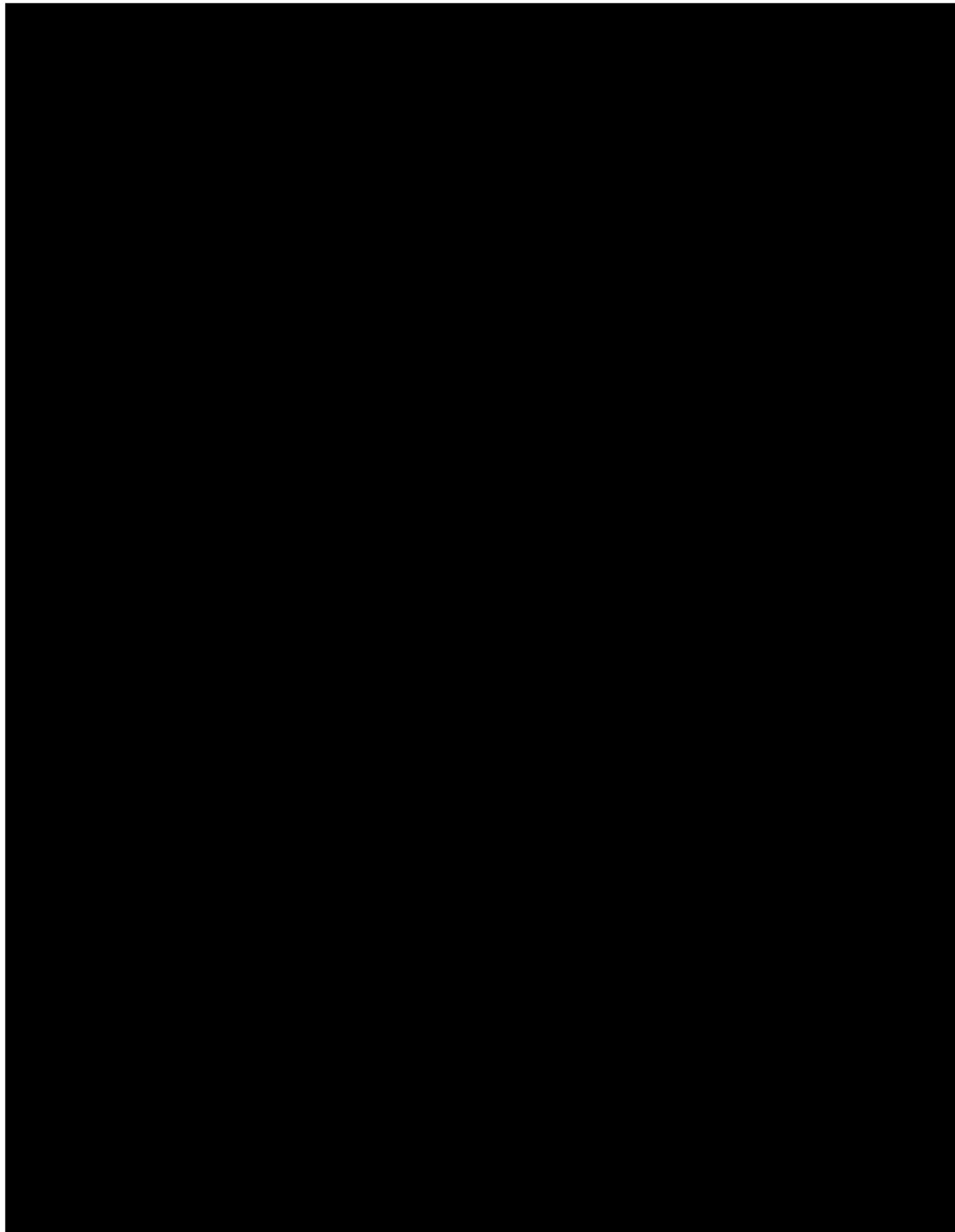
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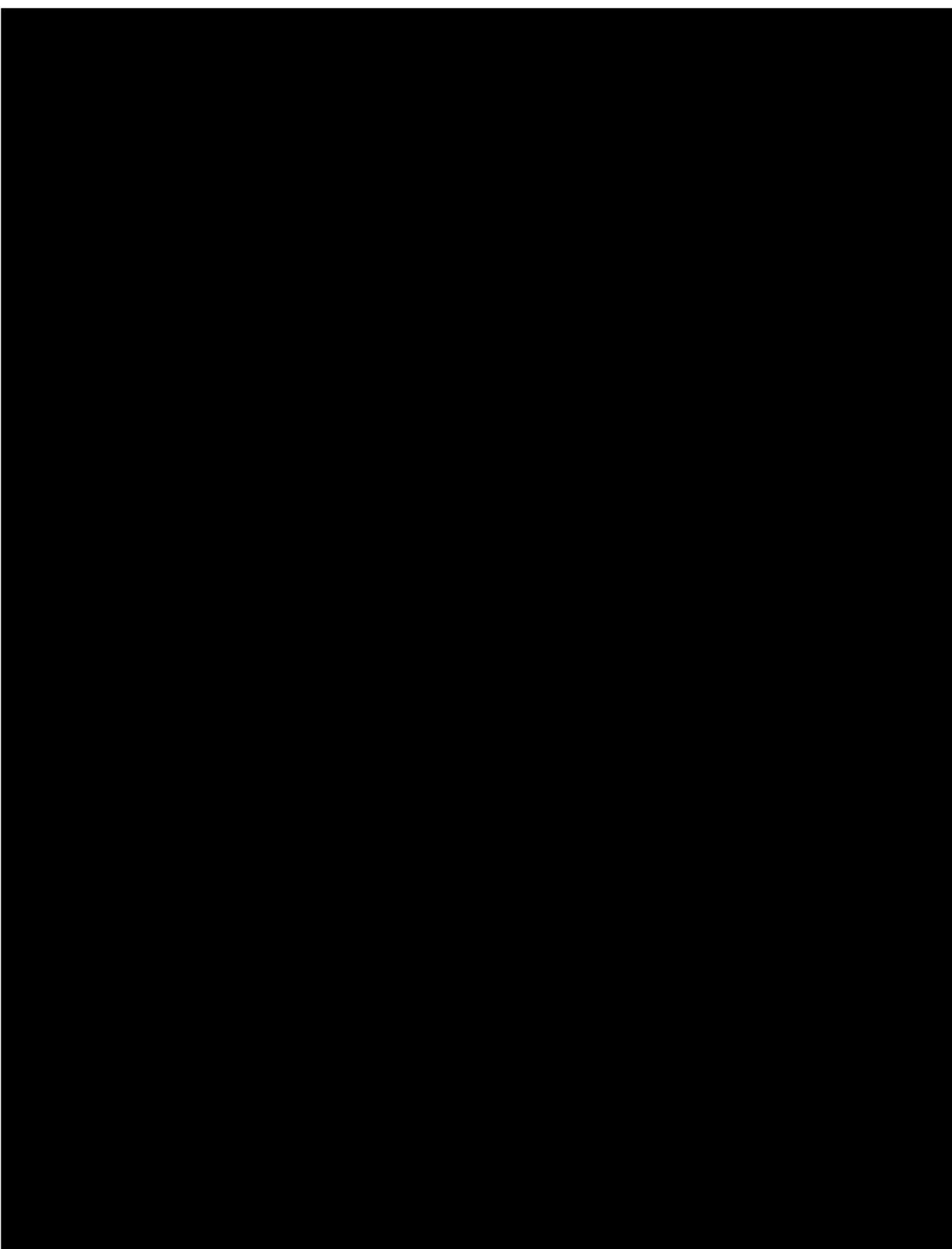
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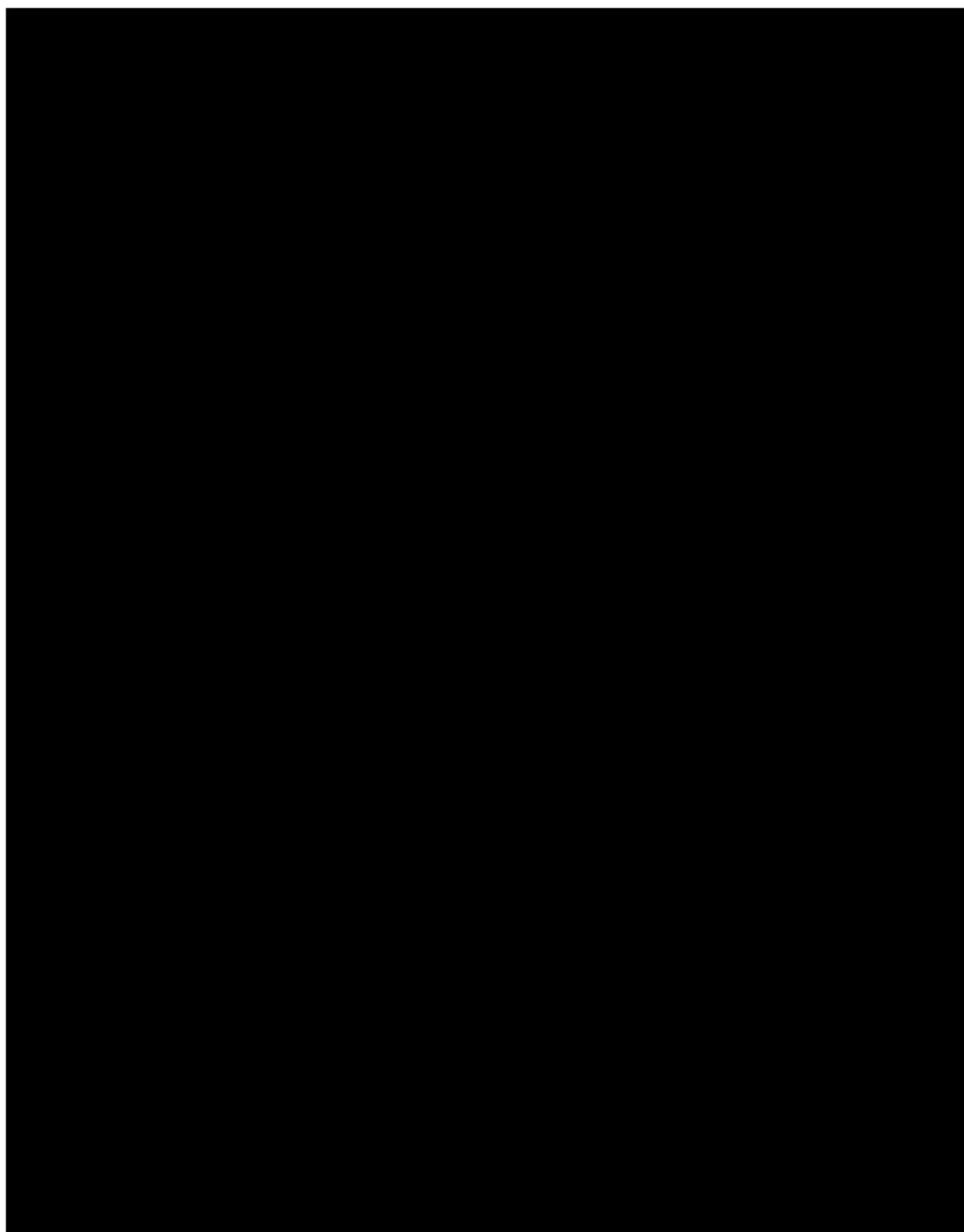
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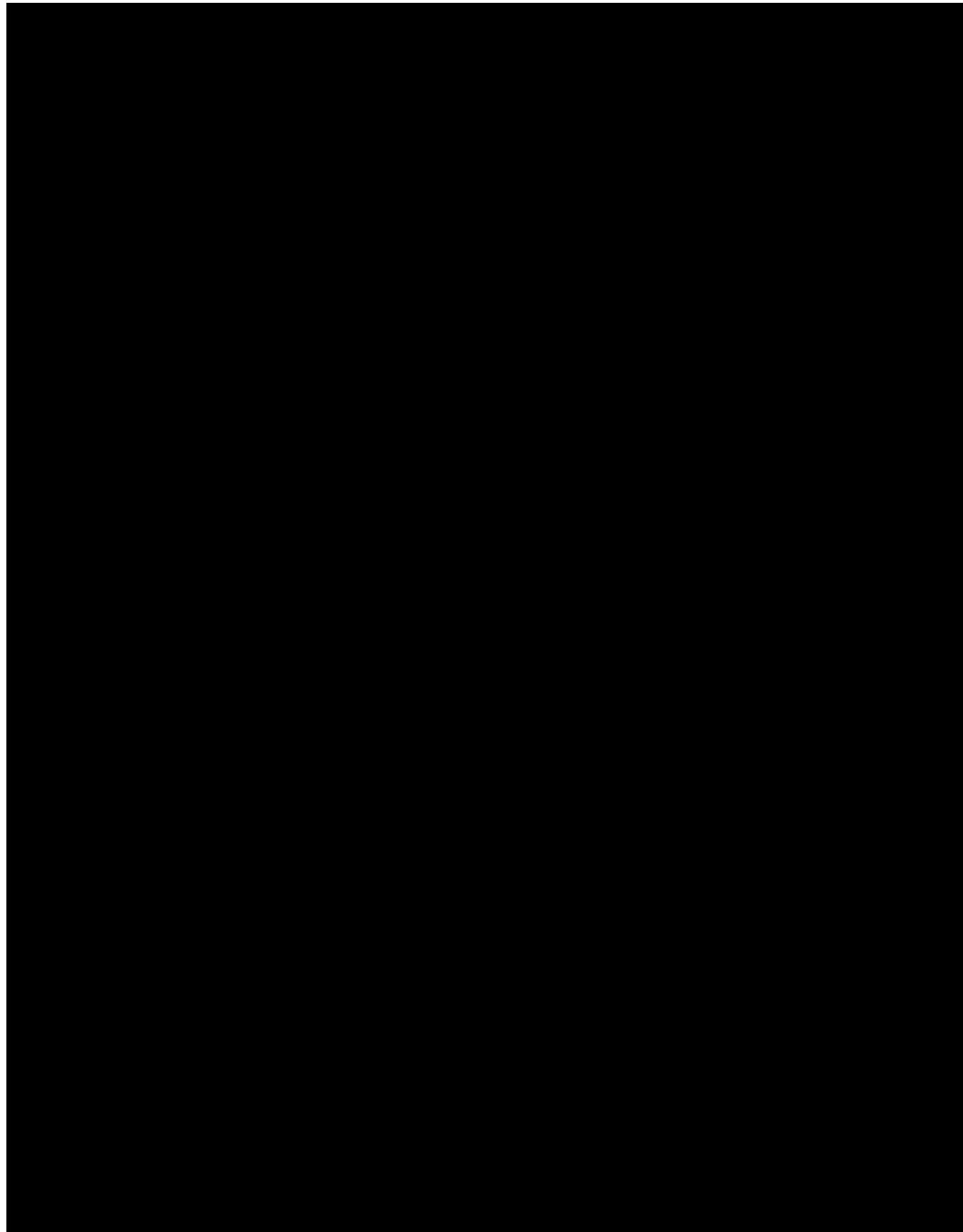
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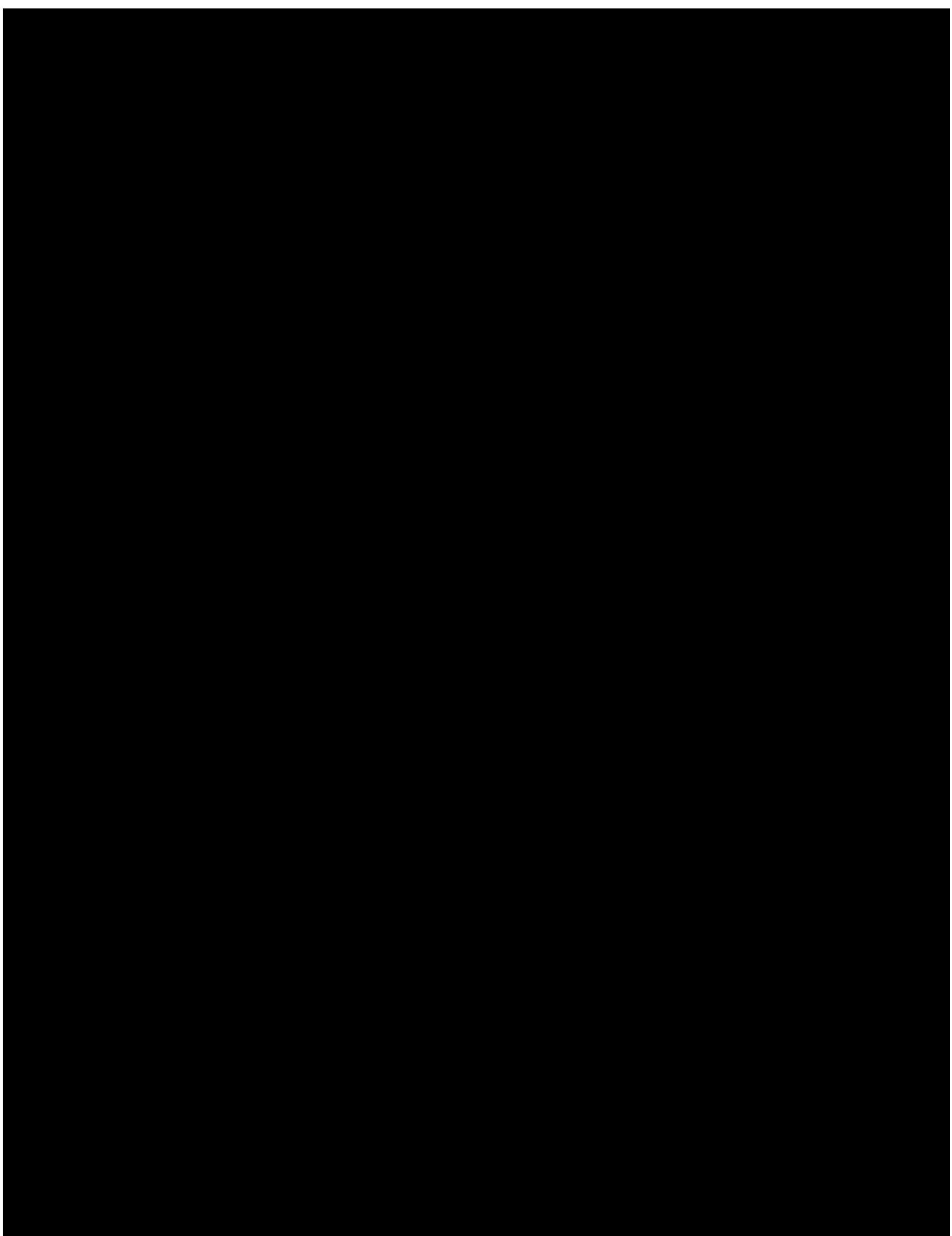
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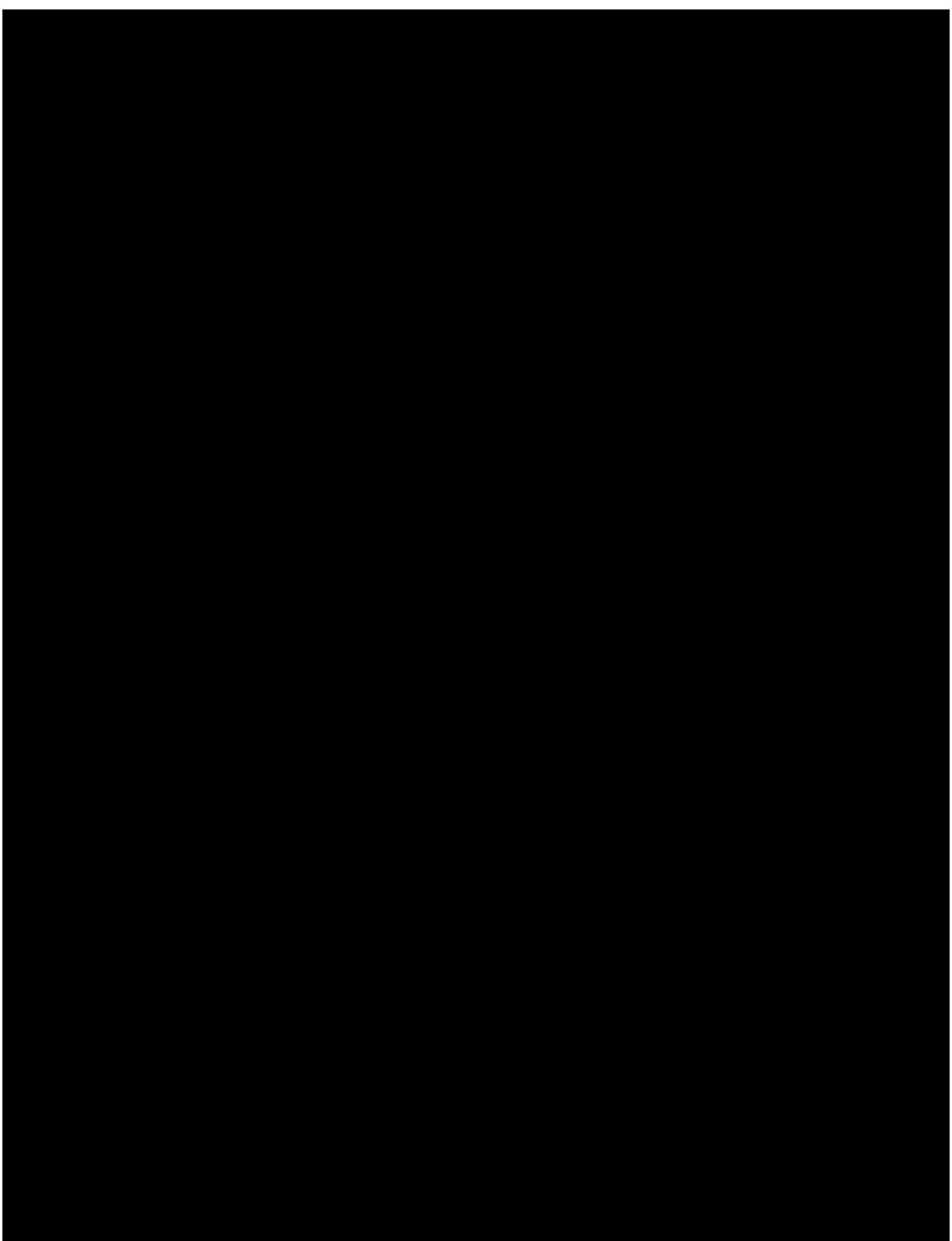
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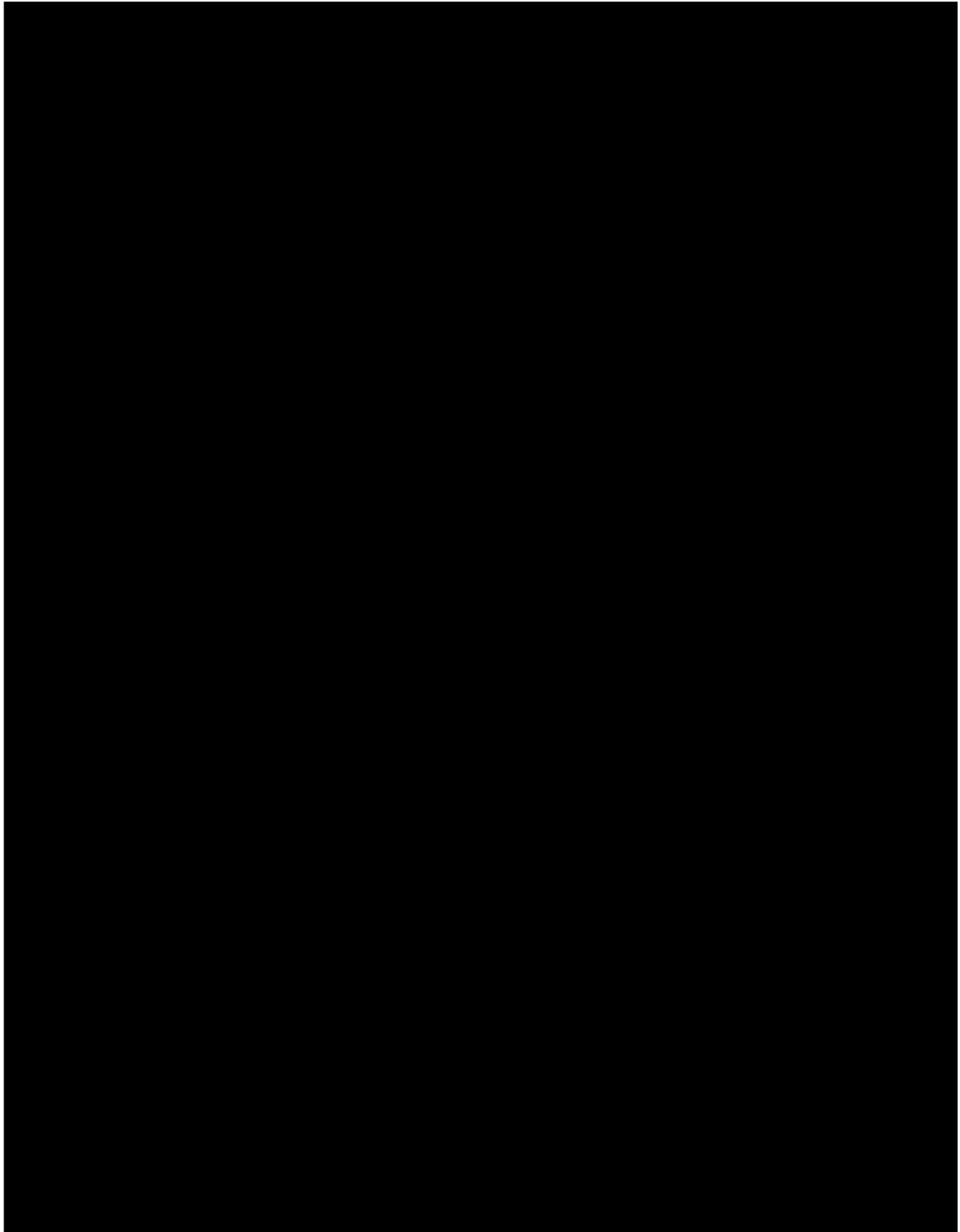
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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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